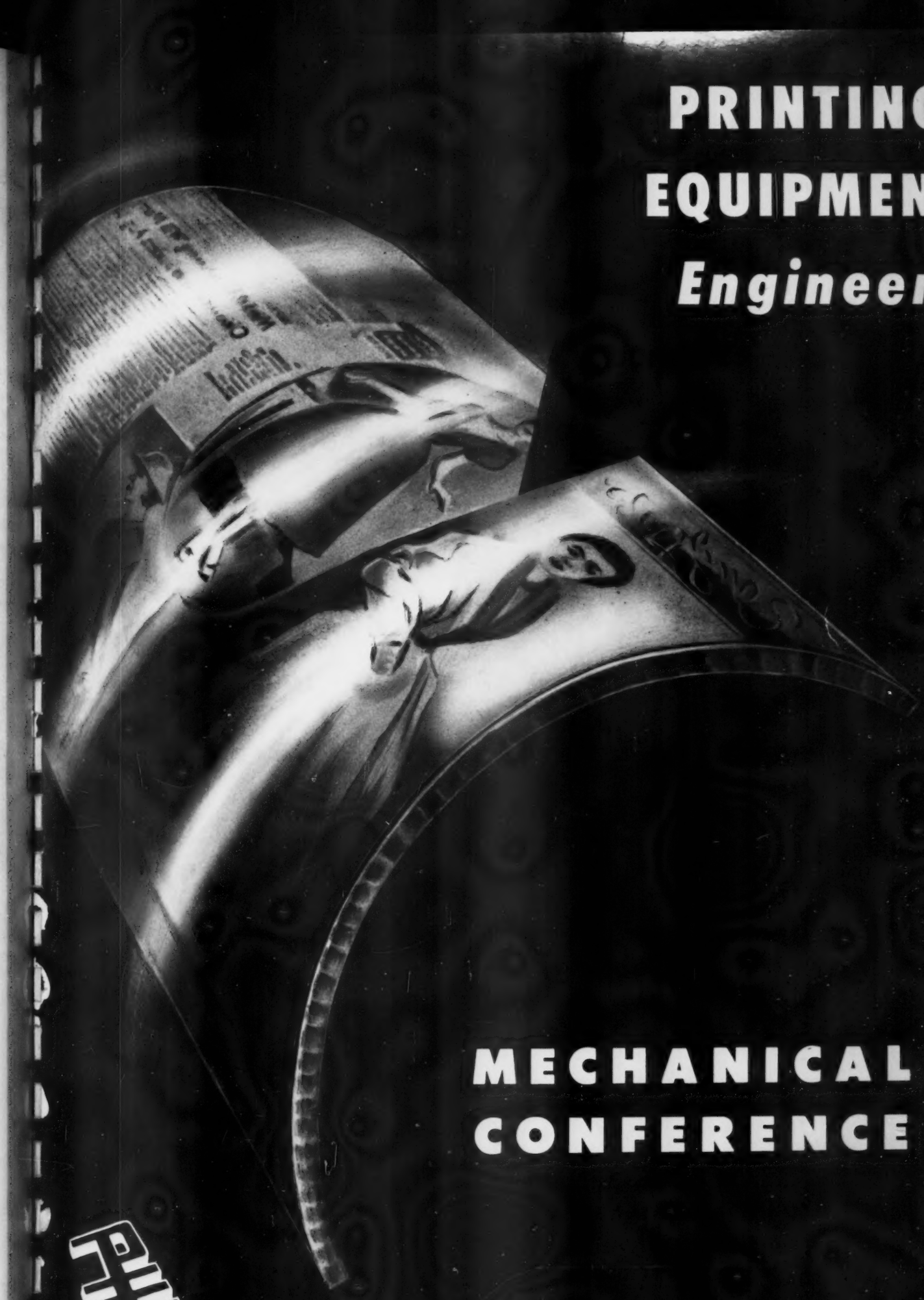
PRINTING EQUIPMENT *Engineer*



MECHANICAL CONFERENCE

Let ANPA-AAAA *Color Be Your Guide*

Sinclair & Carroll Color Book inks enable newspapers to be as timely with color as with late breaking news. These ANPA-AAAA approved R.O.P. colors keep pace with advancements made in newspaper mechanical reproduction. Order them and prove their value in use. Cross mix them in your pressroom and you have at your finger tips all the colors of the rainbow.

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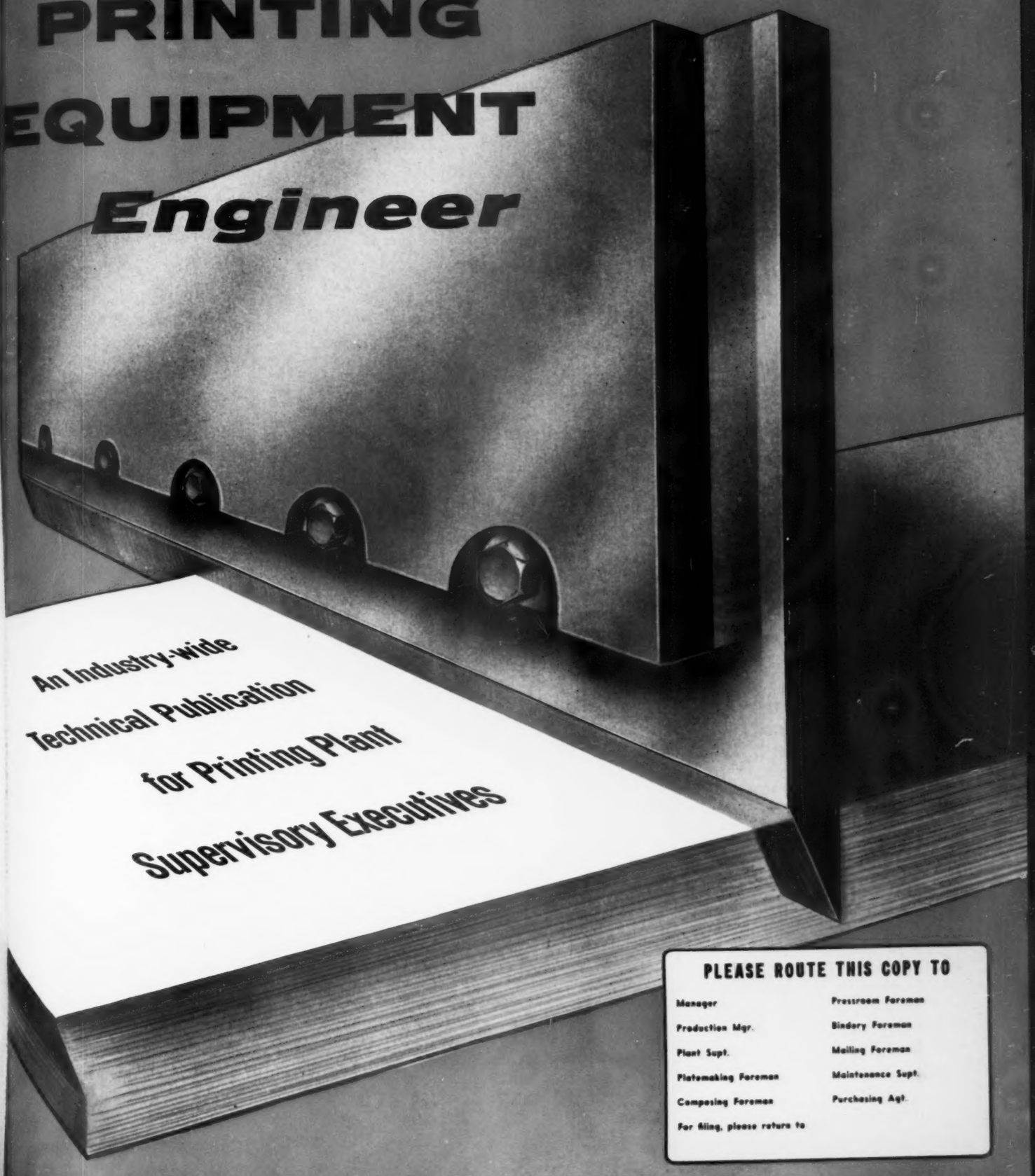
SINCLAIR and CARROLL CO., Inc.

CHICAGO NEW YORK

JUNE 1955

PRINTING EQUIPMENT Engineer



An Industry-wide Technical Publication for Printing Plant Supervisory Executives

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Platemaking Foreman	Maintenance Supt.
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7 REASONS WHY

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- Operates from Teletypesetter tape signals when required.
- 8 hour installation.
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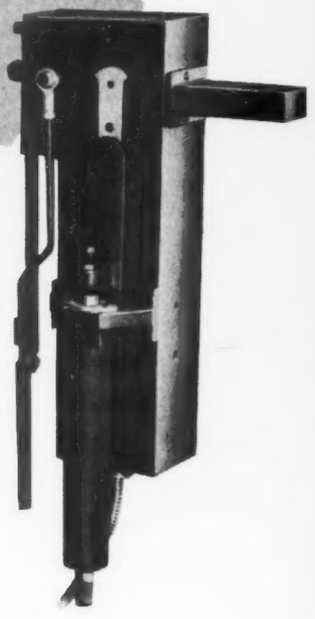
The Star Selectro-Matic Quadder



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. . . and this new 8 page brochure will point out many *other* outstanding features designed to cut your composing room costs by increasing production on all types of white space composition. The brochure is yours for the asking.

When you attend the A.N.P.A. Mechanical Conference at the Edgewater Beach Hotel in Chicago June 6 to 8, visit us at Booth 44 . . . the STAR Selectro-Matic Quadder will be on display and operating.

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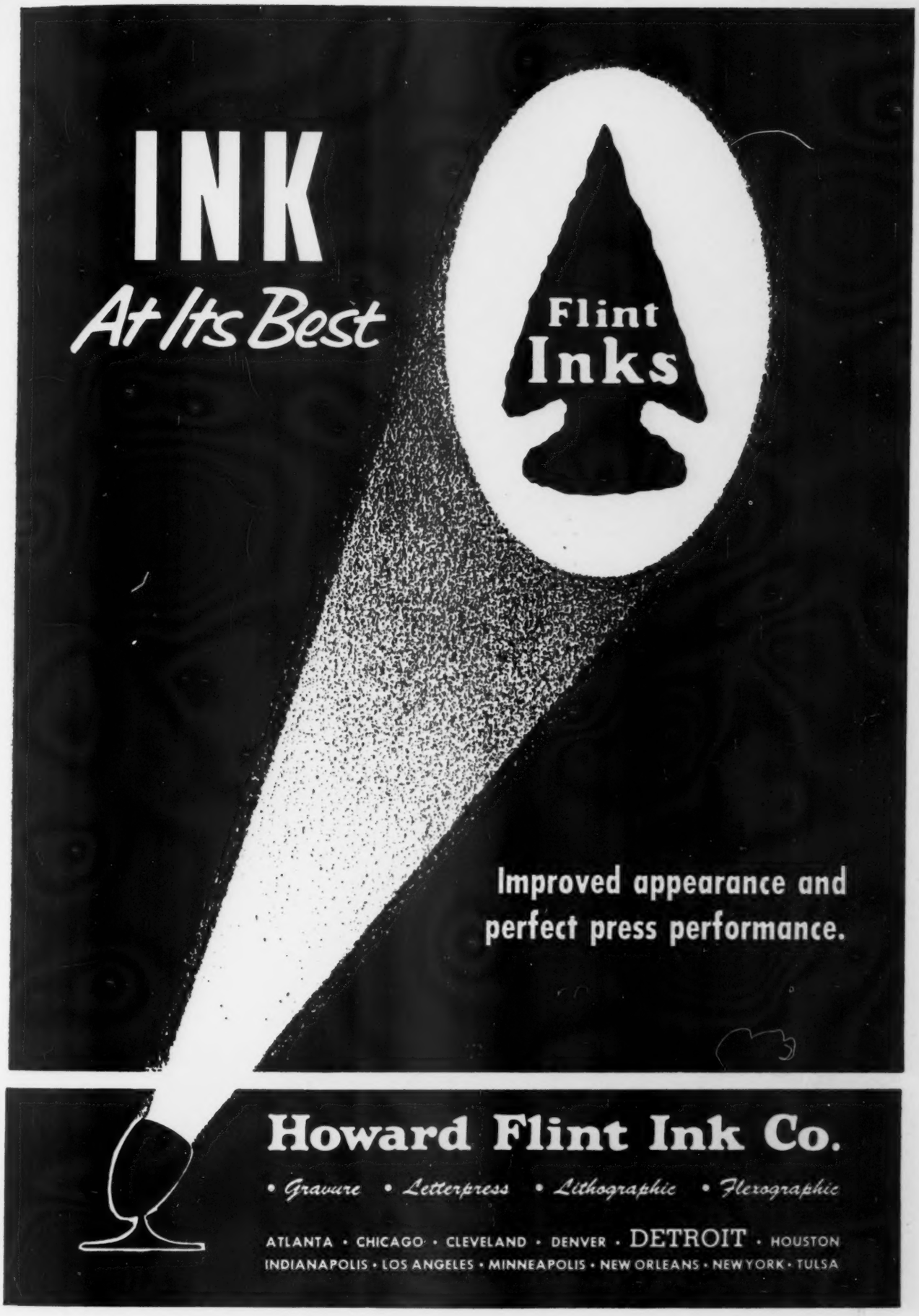
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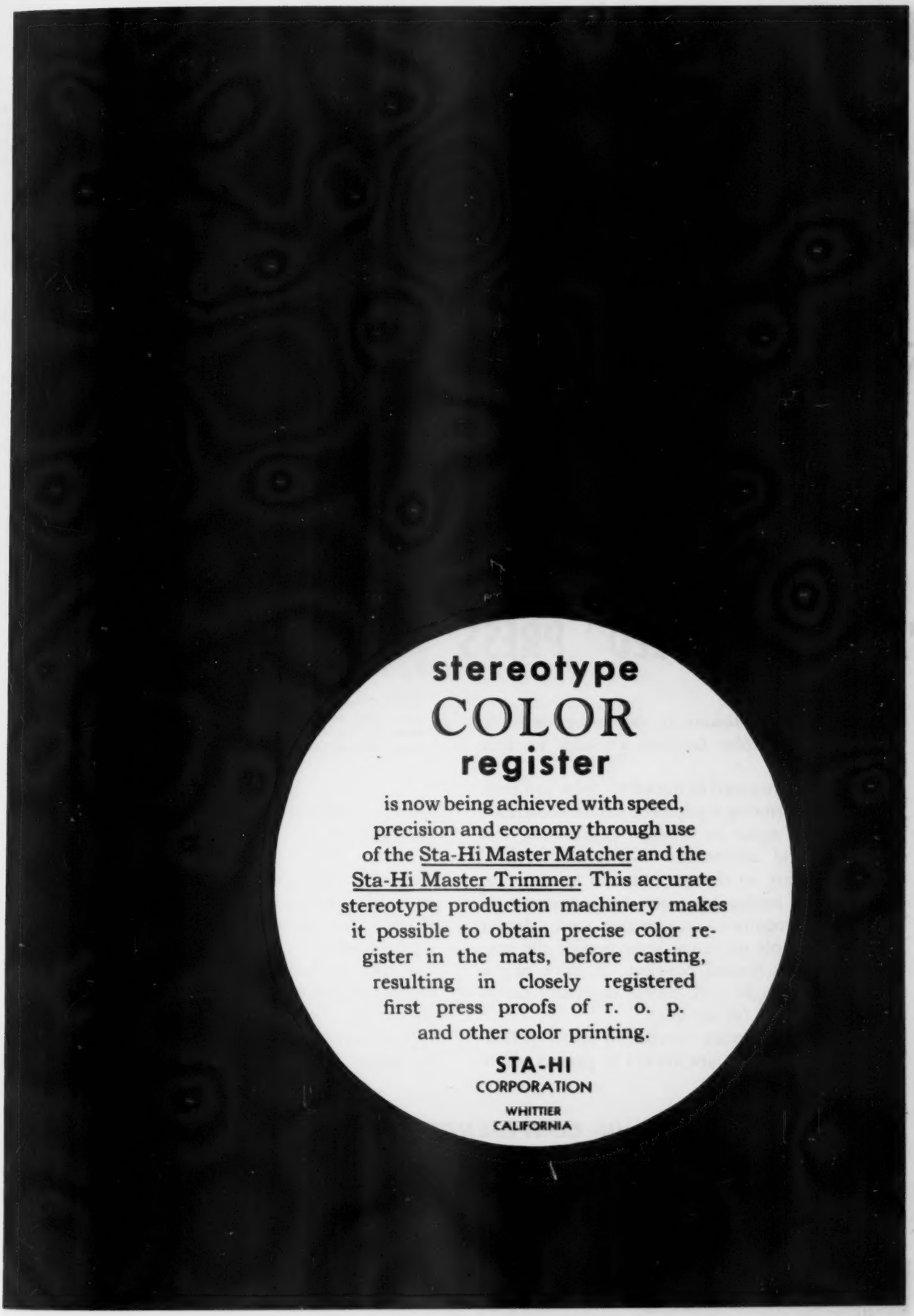
stereotype
COLOR
register
is now being achieved with speed, precision and economy through use of the Sta-Hi Master Matcher and the Sta-Hi Master Trimmer. This accurate stereotype production machinery makes it possible to obtain precise color register in the mats, before casting, resulting in closely registered first press proofs of r. o. p. and other color printing.
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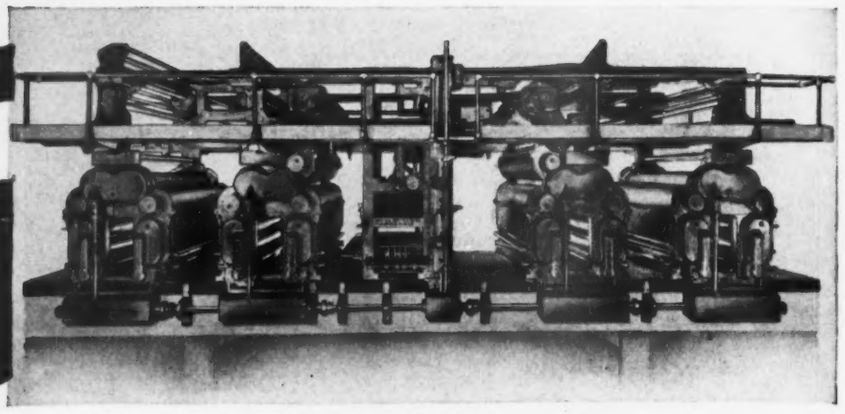
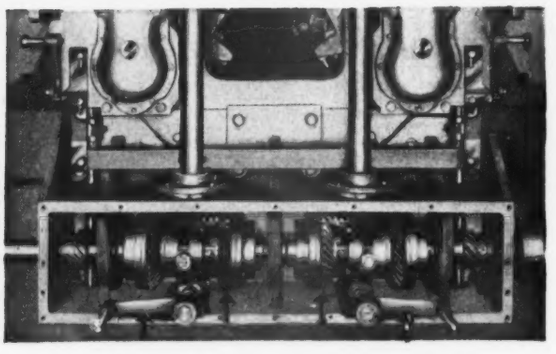


COLOR is best with the SCOTT "EXTRA HI-SPEED" PRESS



SCOTT Octuple Press with two extra color plate cylinders for spot color printing on outside and double center pages. Note the Double Reversing Drive — A throw of the clutch lever reverses cylinder rotation for color.

Each year, publishers, in increasing numbers, are making color facilities available to their advertisers.

SCOTT pioneered in the art of color printing. SCOTT printing equipment has demonstrated time and again its superior engineering and mechanical advantages. For example: it is unnecessary to change fountain gears or to open oil enclosures when rearrangement of color is required — to reverse your cylinder drive, simply move the lever outside the gear box to the desired position, "A Flick of the Lever!" Single and double reversing drives are available for all units.

All SCOTT gears remain in mesh permanently — hence, are always in perfect alignment — resulting in longer life and low cost maintenance.

Whether your needs be a standard press with reversible cylinders for color or superimposed color printing couples — consult SCOTT for technical and sound practical suggestions.

For spot or full color — SCOTT has the most effective and efficient color printing equipment. When making this all important capital investment — why accept less than the best?

Buy with CONFIDENCE - - - Buy SCOTT

WALTER SCOTT & CO., INC.

PLAINFIELD, NEW JERSEY

8-55-3

WRITE FOR THE NEW SCOTT COLOR PRESS BULLETIN

June 1955

An industry-wide technical magazine published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in the commercial, magazine, private plant and daily newspaper fields.

PRINTING EQUIPMENT Engineer

Volume 85 Number 9

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NEW ENGLAND NEWSPAPER SUPPLY CO.

Consolidated with

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ED SPARKS

Why do it the hard way?

Spacing a line of single types and justifying it "tight-to-lift" in a workmanlike manner is a difficult and painstaking job. The method is one of "trial and error," and the spaces—those units which are most frequently used in composition—are the most difficult to get at and to handle. Many of them are mere slivers of metal with their tops far below the level of the letter characters. The difficulty of handling these spaces is graphically shown by the illustration above. See how easily the Ludlow space is inserted in a line of matrices.

It's no wonder that spacing consumes so much of the time and effort put into the composition of single types.

Ludlow solves the spacing problem simply. With the Ludlow system of job and display composition, the spaces logically have been made the easiest units in the line to get at and to handle. The "ears" on Ludlow spaces extend beyond the ears of letter matrices, making it exceedingly easy to pick them out or remove them. A Ludlow compositor can insert a handful of spaces one at a time between words or characters, and can remove several from a line in a single operation.

In addition, Ludlow spaces require far less handling, because of the ease of spacing and justification. "Tight-to-lift" becomes an obsolete phrase, for every line is cast as a solid slug of accurate length. And spacing is further simplified by the use of one set of uniform space matrices for all sizes from 4 to 48 point.

Ease of spacing is only one of the many reasons why Ludlow hand-set, slug-cast composition can be produced so rapidly. The "gathering" system of Ludlow matrix assembly, and all-slug make-up and handling also reduce the time required to get a form to press.

These and other time-saving, profit-earning features help the Ludlow-equipped plant outstrip competition. You will find it worthwhile to investigate fully the many advantages of Ludlow operation.

LUDLOW TYPOGRAPH COMPANY

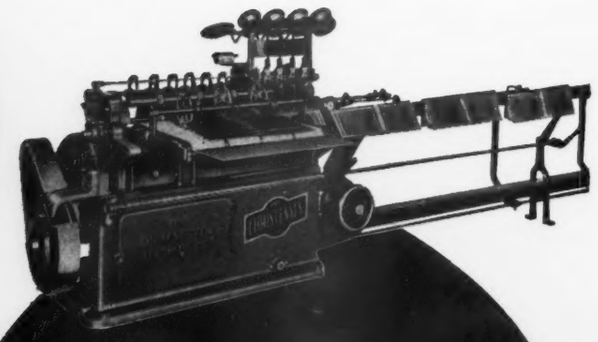
2032 Clybourn Avenue, Chicago 14, Illinois

Set in members of the Ludlow Tempo family

DEXTER

Folding, Stitching, Trimming... for a Profit!

FOLDING is the first step in achieving profits from pamphlets . . . and Cleveland Folders, available in a wide range of sizes, are the standard of the industry. Precision-built, of top quality materials and workmanship, every Cleveland is designed for many years of high-quality, high-speed production.



GATHERING & STITCHING of folded signatures is the next step to bindery profits. The Christensen Gang Stitcher, in the model best suited to your needs, will gather and saddle stitch as fast as operators can feed it . . . up to 7500 books or gangs per hour with McCain Automatic Feeders . . . with unvarying accuracy and reliability.

TRIMMING with the McCain Automatic 3-knife Trimmer not only increases profits but saves floor space and handling expense. Untrimmed books from the Christensen Gang Stitcher are automatically conveyed to the McCain Trimmer where 3 sides are trimmed, and finished books delivered ready for wrapping or packing. Books can be trimmed at speeds up to 7500 per hour. Attachments are available for cutting apart books stitched two-up or with bleed trim.

ILLUSTRATED CIRCULARS ARE AVAILABLE FOR ANY OF THE ABOVE MACHINES

DEXTER FOLDER COMPANY

General Sales Office

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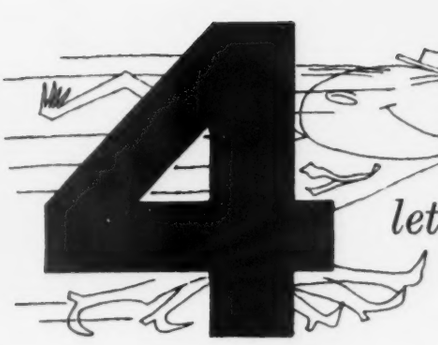
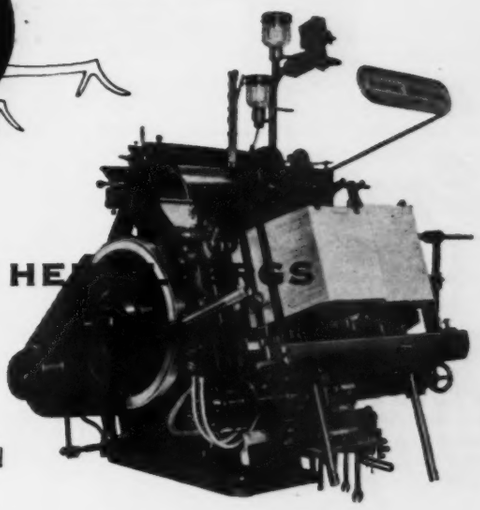
1 *for the money*

2 *for the show*

3 *to MAKE READY!*



4 *let's go...* **ORIGINAL HE**



if making *money* interests you, call for the Heidelberg demonstration car and let us *show* you what modern printing production really means. Easy *make-ready* means less down time, more production, more profit. And when you've got one Heidelberg you'll *go* for many more.

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the best thing next to a printer

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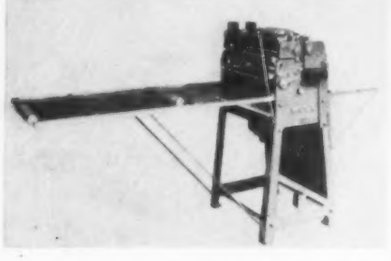
The Wolk Double Pasting Machine is built to apply a uniform film of paste to both end sheets of sewed books just before casing in. A set of electrically controlled



pre-pasting rollers has been added to help assure penetration of super and joint of all rounded and backed work. All this is done in one operation. The unit is available in two models: For books up to 13¼ in. or 17¼ in. from head to tail by 3½ in. thick. Manufacturer is Gane Bros. & Lane, Inc. For further information, please mention PEE No. 474 in your request.

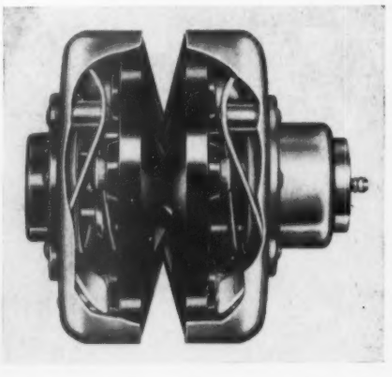
Versatile Xerography

Haloid Co.'s XeroX Processor Model D is built to make up to eight reproductions of original copy in a few minutes from a single exposure. Original copy can be written, typed, printed or drawn on plain or card stock; it may be opaque, translu-

cent or two-sided, according to the manufacturer. Either an offset paper master for runoff of multiple copies on an offset duplicator or a translucent intermediate to be used in diazotype machines may be prepared through use of this process. With the XeroX Camera No. 4, copy may be reduced or enlarged within the limits of 8½ in. by 13 in. For further information, please mention PEE No. 472 in your request.

Variable Speed Pulley

Infinitely variable speeds from a constant speed motor are possible with the new Hi-Lo pulley built for use on automatic typewriters, conveyors, packaging machines



and other motor driven appliances by Equipment Engineering Co. By turning a handwheel on a Hi-Lo standard base the motor assembly is moved toward or away from the driven pulley, allowing standard V belt to run over the various pitch diameters. Movement toward the driven pulley produces the max. speed variation, while movement away produces the min. Feature of Hi-Lo pulleys is the cam and cam follower assembly on the back of the pulley faces. This feature allows the pulleys to adjust automatically to maintain a given speed with load variations, the firm reports, while regulating belt tension and maintaining belt alignment automatically. The pulley face assembly may be replaced

(Continued on Page 18)

We make our own fine alloy steel — and make it nickel-rich — to make TIMKEN® bearings tougher

NICKEL makes steel tougher. So, our steel-making specialists don't skimp on nickel in the fine alloy steel we make for Timken® tapered roller bearings. They use exactly the right amount of nickel to give these bearings the toughness they need to withstand shock and last longer. Exacting quantities of chromium or molybdenum or both guarantee uniform hardness. By using the steel industry's first direct-reading spectrometer, we exercise hairline control of each element at the precise instant of tapping the furnace.

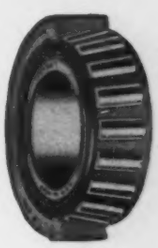
Rolling, annealing, and cooling are done with the same meticulous care. And every race and roller that goes into a Timken bearing is precision case-carburized to give it a hard, wear-resistant surface over a tough, shock-resistant core.

We've been specializing in the production of fine alloy steel for almost forty years. We're the only bearing manufacturer in the country that makes its own steel, because it's the only way we can make sure the quality of our bearing steel is just the way we want it. Steel is the heart of the bearing. That's why we insist on controlling bearing quality *every* step of the way—from melt shop to final bearing inspection. And that's why we don't skimp on the use of nickel.

To be absolutely sure of the highest performance standards in the equipment you build or buy, always specify Timken tapered roller bearings. They are made from seamless tubing or forgings by the most modern processes, under strict control. Only Timken bearings roll so true, have such quality thru-and-thru. The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable address: "TIMROSCO".

This symbol on a product means its bearings are the best.

Only TIMKEN® bearings roll so true, have such quality thru-and-thru



THE SUCCESSFUL
UNIT DRIVE FORMULA

Keep it simple–Keep it sturdy
KEEP IT CUTLER-HAMMER

A modern metropolitan newspaper press calls for the utmost dependability in all its parts . . . if its segments, never in total view or under total control of one person, are to gear and mesh and integrate *dependably*.

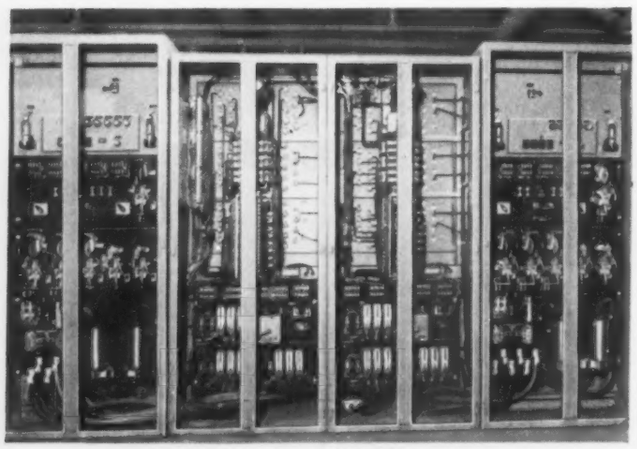
And the dependability formula calls for the simplest means of gaining the specified ends—which in the minds of a growing number of newspaper production people calls for Cutler-Hammer Control on the unit press drives.

The story on the Cutler-Hammer unit press drive control is this: Paired with simple, sturdy, a.c. wound rotor *unit* motors are Cutler-Hammer unit controls embodying simple, sturdy industrial control designs that every plant electrician knows and can *understandingly* service.

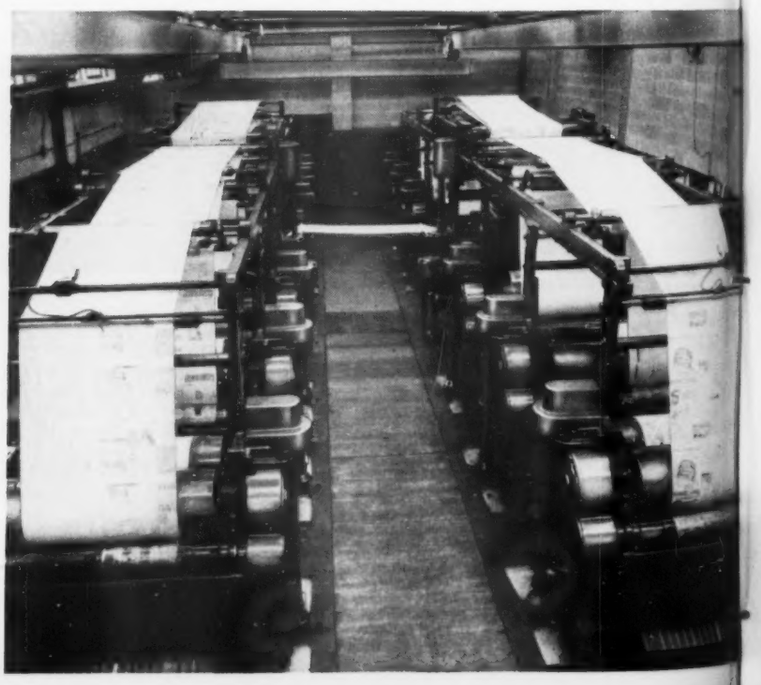
From this dependable combination you get every possible function you can require. But you get it *simply*—without headaches and without heartaches. Inching, threading, satin-smooth acceleration, high efficiencies all the way up! *REAL* synchronization of unit motors, flexibility . . . and blessed freedom from trouble.

Details? Take a look at the C-H cam drum accelerator with 83 speed points. Note that inching and threading *DON'T* draw current through the battery of unit motors. No changing load adjusting resistor switches. No unbalanced loads. No circulating currents or excessive peaks. *Your* electrician can service this drive and he can service this control. Get these facts and many more from the Cutler-Hammer engineering representative.

CUTLER-HAMMER, Inc.,
1360 St. Paul Ave.
Milwaukee 1, Wisconsin



Cutler-Hammer Electronic Control and Single Motor Drive on 48 page Goss Press at
THE BRANTFORD (Ont.) EXPOSITOR
The publisher, John C. Preston, writes:
"We are very pleased with the operation of (the drive). Most satisfactory in daily operation."



Cutler-Hammer Unit Drive Control serves S. Carolina's biggest newspapers

THE STATE and COLUMBIA RECORD

with a combined daily circulation of 110,000 copies. Now in their new $1,500,000 plant, printing on their new 8-unit Goss Headliner press with a normal running speed of 52,500 sixty-four page standard format newspapers per hour. Total capacity 96 pages.

CUTLER-HAMMER
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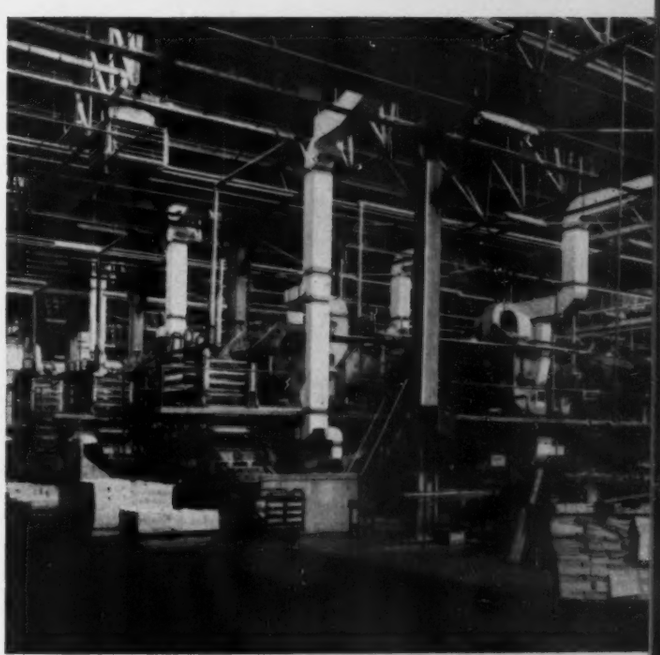
Stop press instantly if web breaks. Web can be rethreaded without latching detectors. Easy to mount.

CUTLER-HAMMER
WEB SEVERING DEVICE

A Cutler-Hammer "original" that has resulted in greater total savings than any other single accessory. It instantly slashes broken web close to impression and guards against destructive wrap-arounds and costly delays—resets automatically.

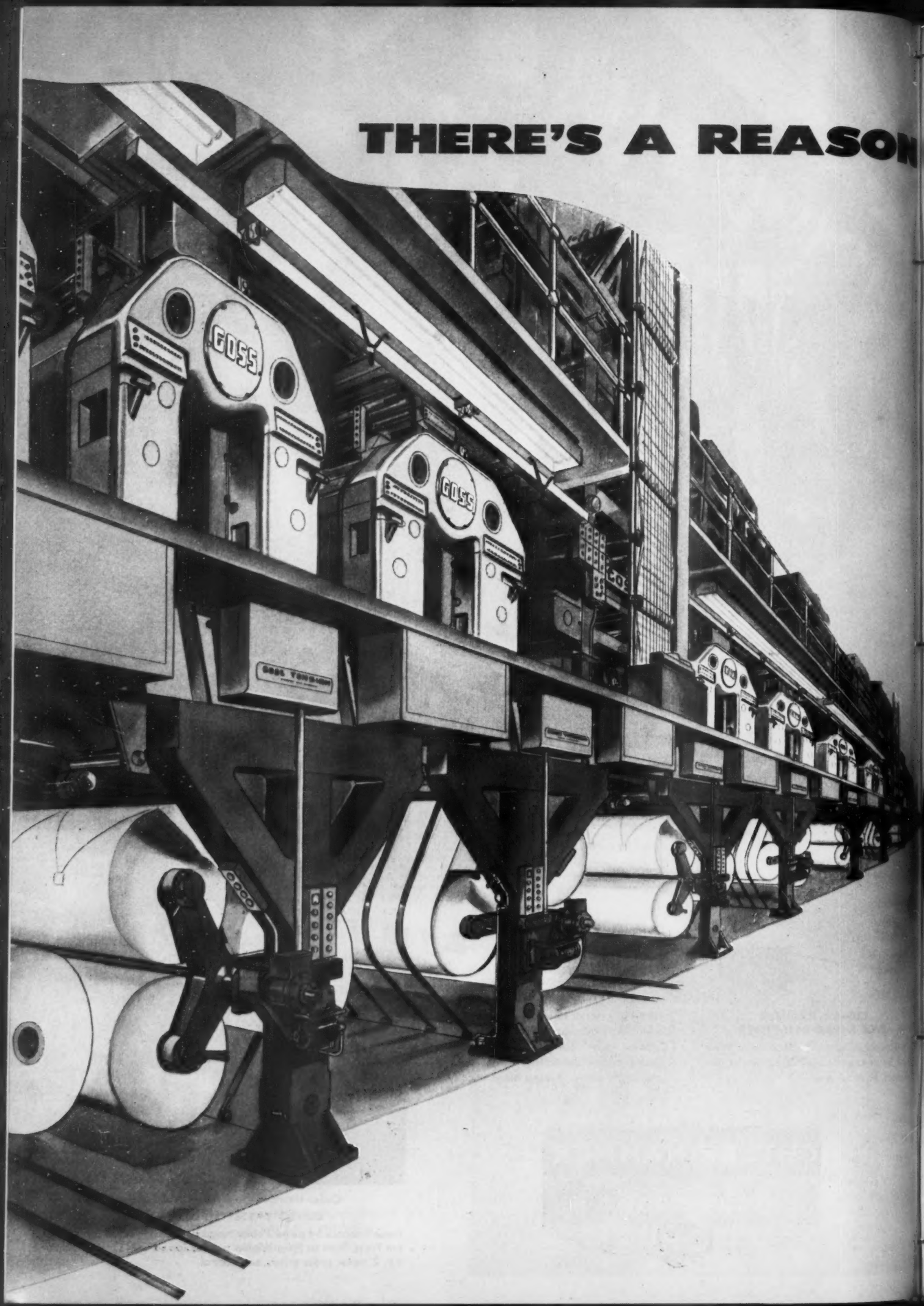
CUTLER·HAMMER
MOTOR CONTROL
C·H



Cutler-Hammer Press Drives and Control in

CUNEO EASTERN PRESS PLANT

These Babcock 64 page 2 color magazine presses in the Cuneo Eastern Press Plant at Philadelphia are equipped with Cutler-Hammer a.c. 2 motor press drives and control.


THERE'S A REASON F
GOSS
GOSS

FOR THE NAME *Headliner*®

WORLD'S NUMBER 1 NEWSPAPER PRESS

Newspaper people the world over recognize the headline as the Number 1 news, and the HEADLINER as the Number 1 press.

To date, more than 1,125 HEADLINER units have been purchased by newspapers – far *MORE* than any other press. Business and production executives of 115 newspapers chose the HEADLINER because of its unsurpassed performance records, producing newspapers of exceptional printing quality with the finest ROP full color at sustained high speeds.

Leading newspapers prefer the HEADLINER for its leadership in ADVANCED DESIGN. We urge comparison in pressrooms, where operating charts bear out the conclusions of astute publishing executives. Compare these outstanding features, a few of the many HEADLINER *firsts:*

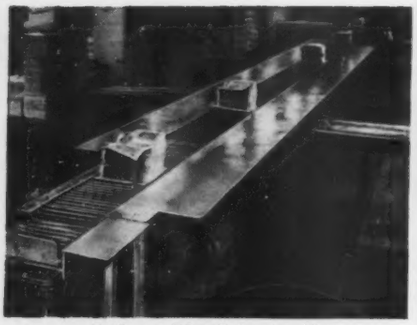
Tension Plate Lockup . . . fingertip Colortrol . . . folded-edge forward delivery . . . Continuous Ink Feed . . . widest range of color flexibility (printing four different colors across the same cylinder, with multiple types of color cylinder arrangements) . . . pre-loaded tapered roller bearings . . . automatic lubrication of units and folders . . . fully enclosed folding motion – FIRST in *finest printing quality* and dependable *high speed* delivery.

While the HEADLINER enjoys undisputed leadership because of its advanced design, Goss research engineers are continuing to make improvements in all features, as they have been doing constantly since the first HEADLINER was designed.

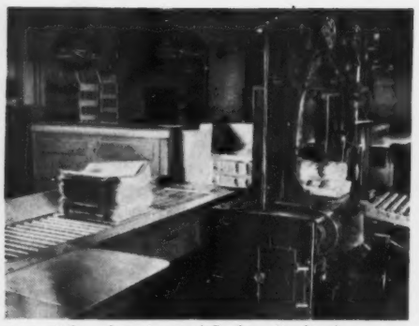
There are many reasons for the name HEADLINER, but HEADLINER is more than a name: it is a guarantee of the best in high speed newspaper presses.

Over 1125 Units

THE GOSS PRINTING PRESS COMPANY



Mailroom Wire Tying Machine Feeder Conveyor



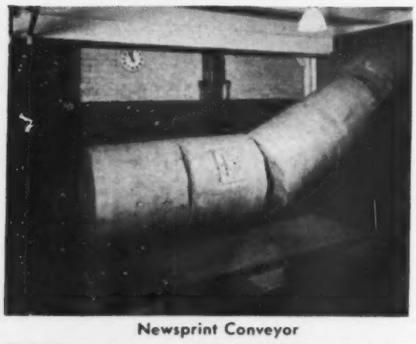
Milwaukee Journal Pusher Mechanism

Stereotype Plate Conveyor System

Telescoping Truck Loaders

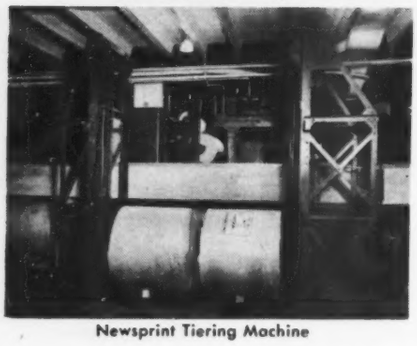
"What's Your Handling Problem?"

Newsprint Track System



Newsprint Conveyor

Non-slip Press Floor



Newsprint Tiering Machine

● There is no one stock answer to every handling problem imposed by modern newspaper plant operation. That is why JAMPOL, with more than 25 years' specialized experience in servicing this important field, can be of such practical value in designing the handling system and equipment that will increase your plant's efficiency . . . make substantial savings in your operational costs . . . and reduce production delays to a minimum.

WE WILL BE GLAD TO DISCUSS THE APPLICATION OF JAMPOL METHODS & EQUIPMENT TO YOUR PROBLEM

THE JAMPOL COMPANY, INC.

General Office and Factory

728—61st Street • Brooklyn, New York

- Stereotype Plate Pneumatic Drops
- Stereotype Plate Electric Elevators
- Stereotype Plate Pressroom Conveyors
- Newsprint Chutes
- Newsprint Elevators
- Newsprint Pneumatic Drops
- Newsprint Conveyors
- Newsprint Track Systems
- Newsprint Transfer Tables
- Newsprint Dollies
- Mailroom Loose Stack Conveyors
- Mailroom Bundle Conveyors
- Mailroom Tables
- Mailroom Bundle Spiral Chutes
- Mailroom Wire Tying Machine Feeder Conveyors
- Mailroom Pushers (Milwaukee Journal Feeder Mechanism)
- Telescopic Truck Loaders
- Press Floors

WORLD'S LARGEST LINE OF STEREOTYPING and ELECTROTYPING EQUIPMENT

HOE precision machines that speed plate-making operations include—

MONARCH II MATRIX ROLLER

Designed for plants with long continuous operating schedules. Provides the strength and rigidity, accuracy of adjustment, and operating precision essential for the highest quality of dry mat moulding.

SPEED MOULD FOR FLAT CASTING

Can be quickly adjusted for type-high, base-high or shell plates by simply turning a hand wheel. Plates as large as 18" x 24" or as small as a column in width can be cast with equal facility.

EQUIPOSE VACUUM CURVED CASTING MOLD

For producing superior stereotype plates for black or color printing, this self-balancing casting mould has an automatic cooling system which prevents defects from too rapid cooling.

RADIAL ARM ROUTING MACHINE

A counterweight and heavy spring provide a sensitive, perfectly balanced router arm for work on flat plates. The high speed router head has precision ball bearings. Holds the largest bits securely.

CURVED PLATE ROUTING MACHINE

Completely enclosed for operator protection. Ease of operation and sensitive control permit exceedingly accurate work. Ball-bearing router head makes possible high-speed routing with minimum vibration.

PRECISION SHAVER FOR FLAT SHAVING

Will shave accurately plates as thin as ⅛" without buckling. Can also shave up to .030" in one cut on plates as large as 18" x 26". Easy reading gauge shows exact thickness after shaving, which can be done to .001".

PRECISION SHAVER AND CUTTING OFF CYLINDER

Shaves a curved plate and cuts off its tail in a single operation, in less than forty seconds. When operation is complete, the machine stops and plate is unlocked automatically. Shaving is accurate to .001".

VERTICAL PLATE CURVING MACHINE

The machine that revolutionized vertical plate curving will curve plates from 9" up in diameter; of any width to 27" along the straight edge; of any thickness up to ⅜". Curvature is uniform for entire length of plate.

Other widely used HOE machines are—

Straight Line Flat Router
Combined Jig Saw and Drill
Saw Table and Monorail Trimmer
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910 East 138th Street New York 54, N. Y.
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BIRMINGHAM • PORTLAND, ORE.

Write for detailed information on any of this equipment in which you are interested or contact the nearest HOE office.

The PRESSMAN knows

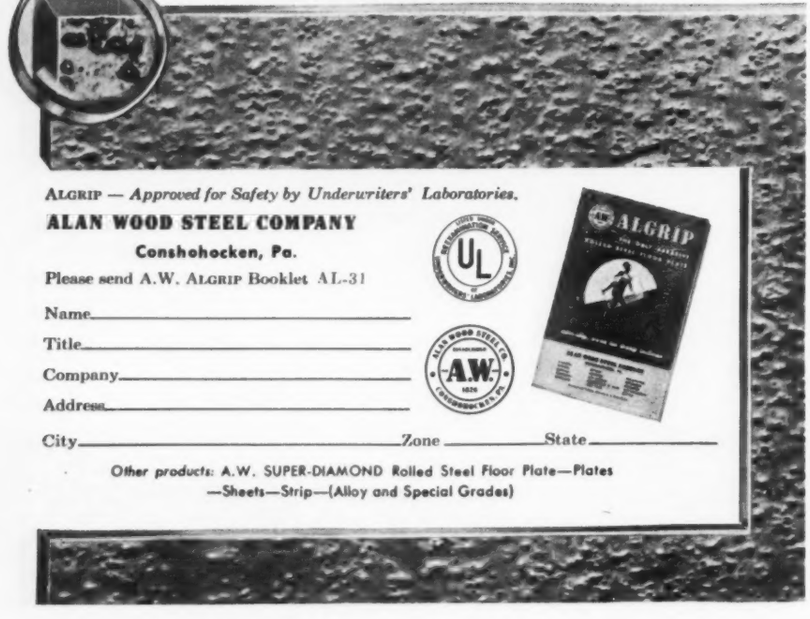
. . . The man in the pressroom plays a full share in the fast action that makes the American printing industry a marvel of swift and accurate production.

The pressman knows that his footing is safe . . . when he works in the pressroom of one of the great printing plants which have learned the value of ALGRIP . . . the only abrasive rolled steel floor plate in the world.

He may not even know, offhand, the trade name of the flooring underfoot . . . but the man who works on ALGRIP flooring, walkways and crossovers *knows that he won't slip.* The depth-controlled ALGRIP abrasive sees to that.

And his employer knows that his lower insurance costs . . . and saving in lost man-hours . . . are helping ALGRIP to pay for itself.

A.W. ALGRIP ABRASIVE ROLLED STEEL FLOOR PLATE



ALGRIP — *Approved for Safety by Underwriters' Laboratories.*

ALAN WOOD STEEL COMPANY

Conshohocken, Pa.

Please send A.W. ALGRIP Booklet AL-31

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City_____ Zone_____ State_____

Other products: A.W. SUPER-DIAMOND Rolled Steel Floor Plate—Plates —Sheets—Strip—(Alloy and Special Grades)

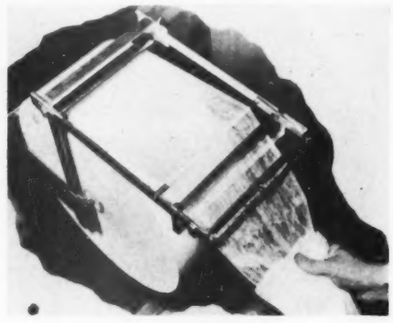
Equipment & Supplies

(Continued from Page 10)

without replacing the entire pulley. Springs in the pulley serve only to keep the pulley faces in contact with the belt at all times and are not driving members. Hi-Lo pulleys are made in seven models, the model depending upon the size of the motor involved. Max. horsepower recommended (at 1750 r.p.m.) ranges from ½ h.p. to 5 h.p. Pulleys are also available with dual ratio and countershaft bases. For further information, please mention PEE No. 392 in your request.

Wiping Material

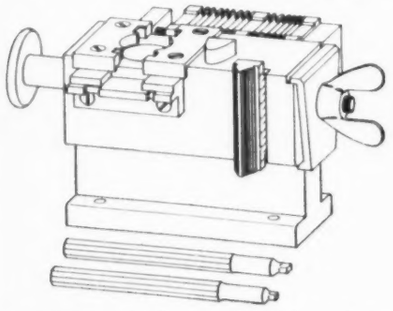
Cleveland Cotton Products Co. has fitted its line of absorbent wiping material, Absorb-Al, with a steel dispenser. The dis-



penser comes in the 10 in. or 20 in. width sizes. The wiping material is pulled out to the desired length and torn off along a cutting edge. The next piece of material is in position to use, says the sponsor. For more information, please mention PEE No. 475 in your request.

Linecomposing Matrix Repair Tool

A linecomposing machine Matrix Repair Tool has been announced by Linotype Parts Co., Inc. Provision is made in the tool for returning worn or bent matrices to original shape and dimension. Gauges are



provided for checking all vital dimensions, as are anvils and vises for reworking. Automatic controls prevent swaging matrix lugs to more than original size. Included in the tool is the following equipment: (1) Gauge to show degree of wear on the tooth combination; (2) Gauges to check side-to-side and top-to-bottom sizes of ears and toes; (3) Die and punches to return worn lugs to original size; (4) Vise with hardened guide blocks to remove burrs from groups of matrices; (5) General purpose anvil for straightening bent combination teeth; (6)

(*Continued on Page 28*)

There's really no need for your newspaper to put up with the costs of maintaining a large inventory of printing equipment and supplies.

At Eastern, one of our main jobs is to keep well stocked with hundreds of products you need to produce a well printed newspaper. Eastern products range from expendable, everyday necessities to major pieces of equipment for your composing room, stereotype department, press room and photoengraving department.

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Your orders to Eastern get immediate, personal attention from a staff of specialists with long experience in serving the needs of newspaper production departments. Delivery is on time!

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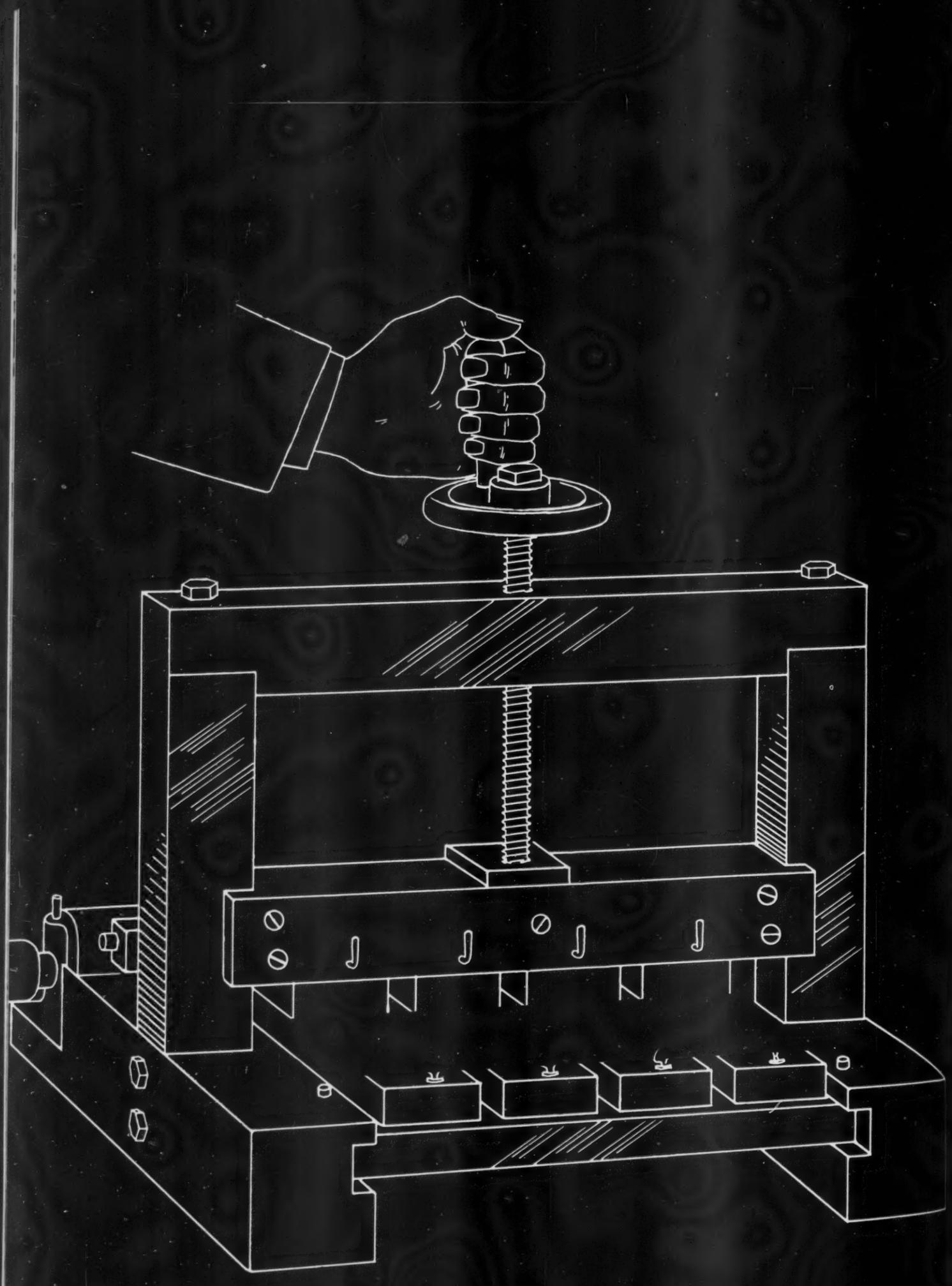

Here's a new quality-control tool for IPI inks which measures and helps to reduce costly plate wear

An important—but often overlooked—factor in metal plate wear comes from the abrasive action of some pigments due to their inherent characteristics or to the presence of impurities.

This IPI Plate Wear Machine was developed to simulate actual plate wear during a typical commercial press run. It enables our ink experts to measure and compare accurately the abrasive qualities of one ink with another, and to determine the amount of plate wear caused during simulated press runs.

Thus, a new scientific yardstick allows us to check and improve constantly upon our choice of pigments most suitable for longer plate life.

Such traditionally high standards of IPI quality control help increase the quality mileage of your plates during long press runs, with sharper, cleaner printing—at lower plate costs.

IPI service at work for you

Printing plants of all sizes are invited to use IPI's complete ink service facilities in printing centers from coast to coast. Each local IPI service station and branch is staffed by local experienced ink men, well-seasoned in the special printing problems of each locality. They are always on call to help you solve any printing problems—large or small—that may arise. For prompt ink service with a personal touch, contact IPI.

IPI and IC are trade-marks of Interchemical Corporation

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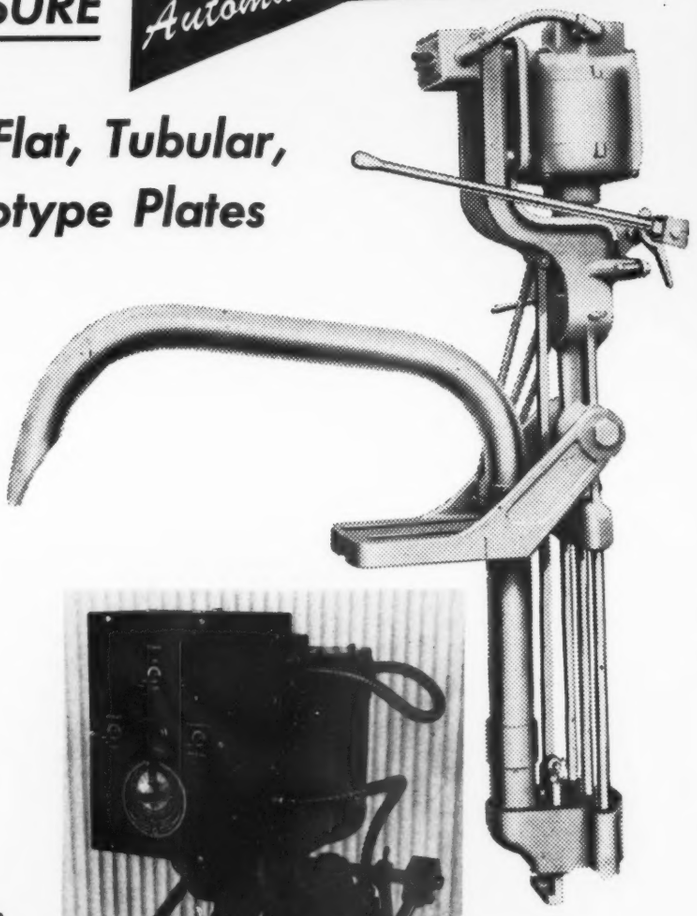
NOT THIS ...

NOT THIS ...

BRING YOUR PLANT UP-TO-DATE with...

A NEW ELECTRO-PRESSURE *Automatic Metal Pump*

For Controlled Casting Flat, Tubular, Semi-Cylindrical, Stereotype Plates



WITH THESE FEATURES:

1. Uniform Pressure delivery which may be regulated to suit.
2. Uniform speed of delivery, unchanged in its full travel from the pot to the box which pours the alloy in a solid steady ribbon-like flow that displaces the air properly.
3. Uniform and controlled alloy delivery eliminates the need for individual judgment and tolerances of time and temperature.
4. Swivel pipe nozzle and spout serving a multiple of casting units.
5. Direct draw from the main pot.
6. Proper agitation, insuring the balance of the alloy as intended.

Utmost safety assured through elimination of hazards encountered with hand casting and hand pouring methods. Save fuel, metal, effort and time up to 30% and 35%. Produces smoothest cast surfaces and densest cast in less time with less effort and cost than by any other casting method.

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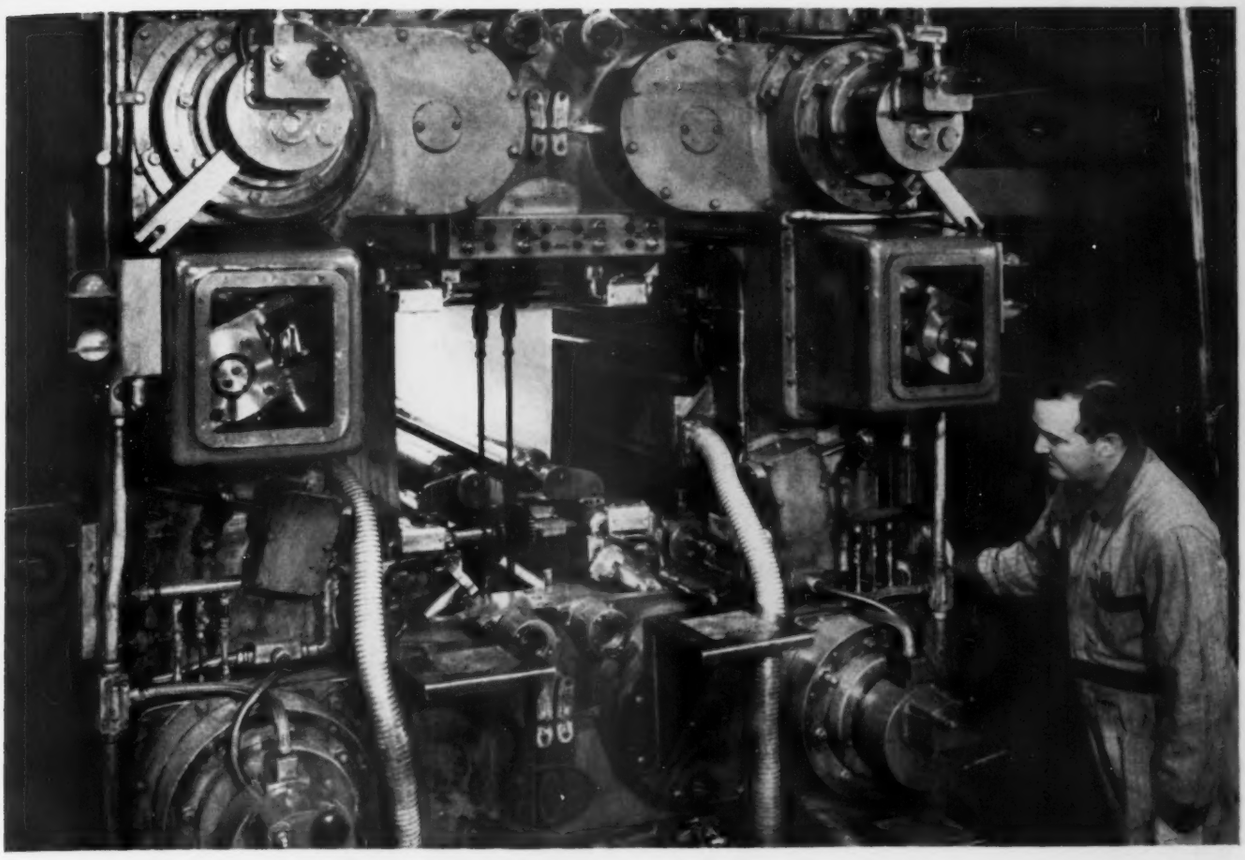
Write for International Pump Brochure and Installation Operation and Maintenance Bulletin



How to maintain multi-color register

AUTOMATICALLY

. . . at all operating speeds

There's just one way to have completely satisfactory . . . automatic . . . color register control. It's the Hurletron way.

Hurletron controls are not new. They're time-tried and proven. The largest and finest color-rotogravure printers in country have used Hurletron Color Register Controls for years. They've become standard equipment. Now they are available for ROP color . . . and are in successful operation by leading dailies.

Your Hurletron Control will maintain accurate, automatic register of all colors within a few thousandths of an inch. The register established at low speeds will be maintained up to highest operating speed. And it will make high speed corrections at splices, materially reducing the number of bad copies.

Here's the practical, proven method of insuring top quality ROP color register . . . hour after hour. It's speedy . . . simple to operate . . . dependable . . . and fully automatic.

Let us show you how this remarkable equipment can help you. And be sure to ask for our latest booklet on ROP Color Register Control.

HURLETRON

AUTOMATIC

Register Control for R.O.P. Color

ELECTRIC EYE EQUIPMENT COMPANY

1930 EAST FAIRCHILD STREET, DANVILLE, ILLINOIS

Manufacturers of: Hurletron R.O.P. Color Registration Controls; Automatic Controls of Caliper and Weight on Paper and Board; Center Line and Side Web Guide Controls; Cut-Off and Back-Up Controls; Slitter Controls; Moisture Controls.

Better Ink
Means HERRICK INK
and
Greater Legibility

All-round legibility is a subject that stirs wide interest at every Mechanical Conference. And when ink is mentioned, you need only turn to the Herrick Representative. He can tell you how a Herrick ink can be custom-made to suit just *your* pressroom conditions...an ink that will *always* give your paper a clear, clean-cut, attractive appearance.
So look up the Herrick ink man before you go away from the conference... you'll be richer for it!

More and more newspapers are demanding Herrick News Inks for

- **H** igh color strength
- **E** xceptional coverage
- **R** ight density
- **R** eliable service
- **I** ncreased sales appeal
- **C** olor uniformity
- **K** nowledge and experience

3508

HERRICK Inks

William C. Herrick Ink Co., Inc.

Main plant and office
East Rutherford, N. J.

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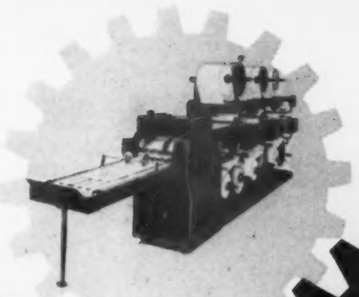
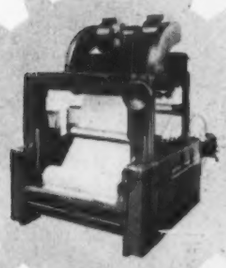
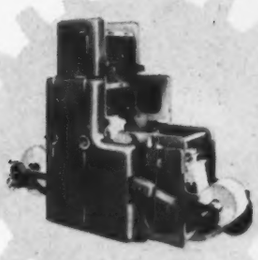
QUALITY NEWS, LETTERPRESS, AND OFFSET INKS



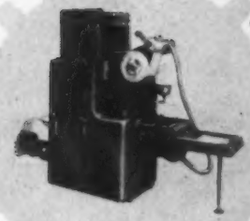
Speed-Flex collator



Speed-Flex ColorVerter



Model C3C RTR



Model C3C

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RANDOLPH 6-7971

"PRODUCTION INSURANCE" for the Houston *Post's* giant new press is provided by individual G-E drive motors—totalling 900 hp—for each of its 15 press units and 3 folders. Should as many as ⅓ of the motors be lost from the press combination, those remaining could still carry the whole load at almost normal speed.

Simple, flexible G-E electronic press drive powers Houston Post's new Goss press

Factory-assembled equipment and elimination of most moving parts cut installation and maintenance costs in new $4,000,000 plant

The heart of the Houston *Post's* new $4,000,000 plant—opened in January, 1955, on the newspaper's 70th anniversary—is its giant new Goss Headliner press, powered by a General Electric electronic press drive. Eighteen G-E motors drive its 15 units and 3 folders, geared to turn out 180,000 forty-page newspapers per hour.

Many reasons prompted the *Post* to specify this G-E "printing press drive of the future," among them:

Lower installation costs—approximately 15 per cent less than conventional drives—because of modern-designed and factory-assembled-and-wired control panels.

Lower maintenance costs. With the simple, easily understood and industrially accepted components of this electronic system, most moving and wearing parts are eliminated.

Increased flexibility for various press combinations because threading and running power for each unit comes from its individual drive motor.

Fewer web breaks due to the drive's smooth, stepless speed control.

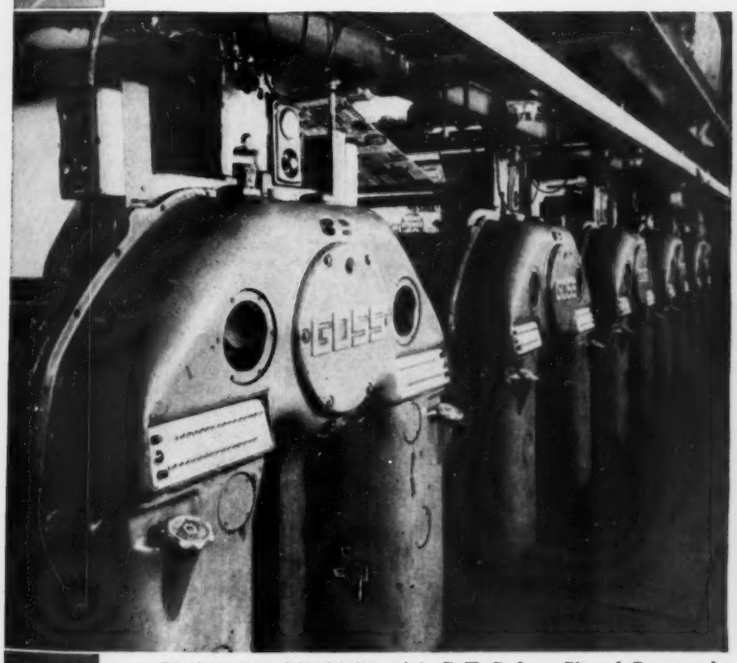
Savings in power cost because of the higher overall efficiency and power factor of electronic drive *that result from absence of secondary resistors.*

Greater headroom in the reel room, since motors are mounted on the side frame of the press.

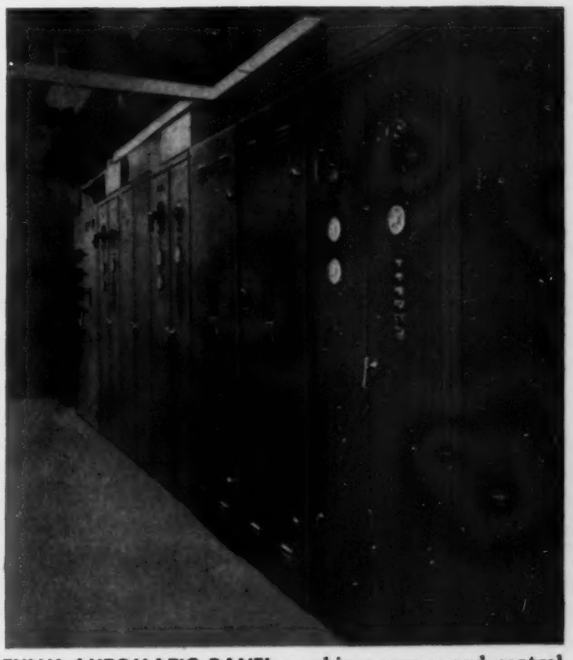
For full information on the G-E electronic press drive, contact your nearest G-E Apparatus Sales Office, or write for Bulletin GEA-5523 to General Electric Co., Section 653-36, Schenectady 5, N. Y.

Engineered Electrical Systems for Newspaper Plants

GENERAL ELECTRIC



FINGER-TIP CONTROL with G-E Safety Signal System is another feature. G-E push-button stations are conveniently mounted at various locations on the press for quick accessibility and maximum safety to the pressman.



FULLY AUTOMATIC PANEL combines power and control circuits for the d-c drive motors in this compact row of cubicles. For any future plant expansion, matching cubicles can easily be added.

Equipment & Supplies

(Continued from Page 18)

Tooth combination anvil for straightening teeth on back-milled matrices; (7) Vise for holding individual matrices while reworking, or while removing tooth combination burrs. The new tool, No. Z-77-S, is available in stock. For further details, please mention PEE No. 489 in your request.

Savaloy Type Metal Flux

A plastic type of flux, called Savaloy, has been developed by Federated Metals Div. American Smelting and Refining Co. It is designed to liberate metal from the dross that forms on molten type metals. When Savaloy is mixed with the dross on top of the molten metal, it ignites and creates a high temperature throughout the dross. The particles of good metal which have been caught up by the dross and partially cooled at the surface of the melt are made liquid by the high local temperature and drop from the dross back into the melt. The dross is left as a dry powder with a minimum metal content and is then skimmed from the surface. A 4¼ in. stick of Savaloy is large enough to treat 2000 lbs. of metal. It can be cut off proportionately for lesser amounts. Savaloy is also used on mouthpieces, pump bodies, plungers, nozzles, flat stereotype molds, and other places where difficulty arises from sticking and metal buildup. For further information, please mention PEE No. 476 in your request.

Micro-Color Plate Register Machine

Platemakers Equipment Co. has developed a register drill device for registering editorial and advertising color plates cast from stereotype matrices which are received from out-of-town sources and which are not provided with register marks or it may be necessary to reregister some plates after they have been cast because of local conditions. Essentially, the device consists of a base and three attachable units used in connection with the base. These are a frame to which is attached a Plexiglas sheet (Fig. 1) upon which a proof of the key plate has been taken; an illuminated magnifying glass unit (Fig. 2) to facilitate location of the four register pins, and an electric drill unit (Fig. 3) for drilling holes for the register pins in both plate and mounting base.

The first operation in registering all plates

Fig. 1.

in the set is to place the black or key plate on a same size piece of thick cardboard (to prevent the drill penetrating the base bed). The key plate is positioned centrally on the base bed and held in position by clamps movable by means of two adjusting wheels on the outer edge of each side of the base. The spots where the register holes are to be drilled are now selected and are compared with the same locations on the red, blue or yellow plates.

The pins in the four punch holders shown in lifted position in Fig. 1 are now lowered to the plate as shown in Fig. 2. The punch holders are fitted with two locating adjustments. The elbow is a friction joint and the slidable shank is held to the horizontal rod by a set screw.

After all four of the register arms have been adjusted so the pins will touch the plate at the proper point, the arms are locked on their bearing rods. The register arms are now swung up and outwardly. The bearing rods being rotatable so that when again ready to be lowered with the pins resting on top of the plate they will be re-

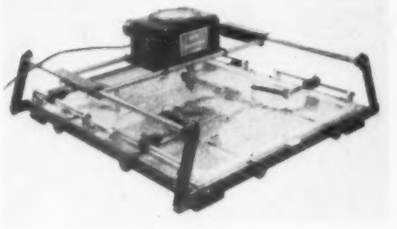


Fig. 2.

turned to their exact previously registered positions.

The key plate is now inked with a hand breyer. The Plexiglas frame is lowered on the key plate. A proof of the key plate is now taken by pressure of a hand roller over the Plexiglas sheet. The frame with the

(Continued on Page 40)

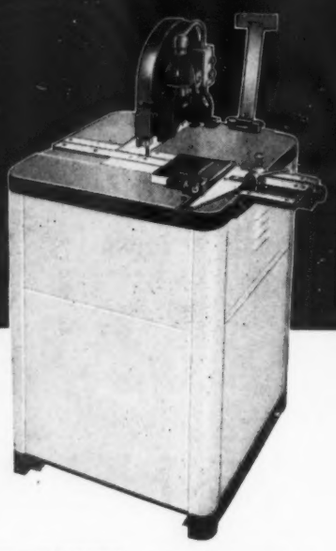
NOW!

TWO ROUSE TIME-SAVING

PLATE SAWS

With Exclusive Automatic Feed

For Photoengravers, Stereotypers, Printers



No more manual squaring up, guesswork alignment, tacking, scoring, beveling, trimming, removing burrs, using wedges. That's how a Rouse Plate Saw soon pays for itself.

Just make 4 quick, easy, automatic saw cuts and your plate is ready for the printer. The *exclusive* automatic feed guarantees each cut to be perfectly square, smooth-edged and uniform on any copper, zinc, magnesium or plastic plate, whether wood or plastic mounted or shellcast.

Cuts are made to Picas, Points, Quarter Points or Inches as required. Outside Mortising is effectively done to pica and point measurement.

NEW 24" MODEL—automatically cuts up to 24" of type-high work in only 27 seconds.

15" MODEL—identical to 24" Model except it automatically cuts up to 15" of type-high work in only 17 seconds.

BOTH MODELS occupy only 26" x 26" floor space.

NEW FEATURES (on Both Models)

1. Now you can make *cuts as small as 1 Pica square* for signatures, key letter or number changes, etc.

2. *Narrow Cut* measures about 2 points (.028"), permitting cutting between type lines.

3. Saw blades are changed in just 1 minute due to new lever-operated tension release. Blades stay sharp during 30-40 hours continuous operation. New blades are inexpensive.

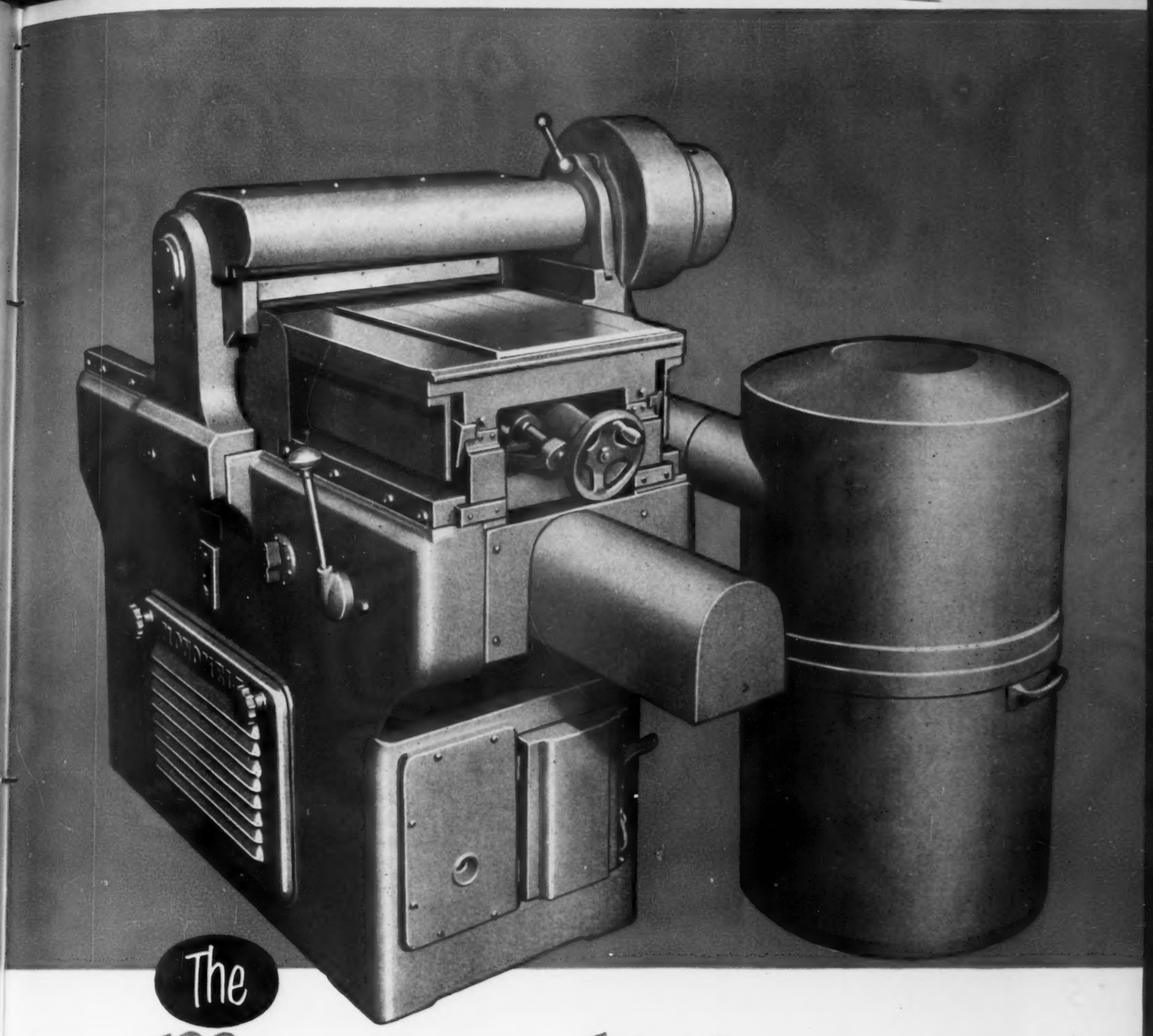
4. New simplified gauge adjusting device makes it easier to maintain perfect squareness in cutting.

DESIGNED BY MEN WITH 25 YEARS KNOW-HOW IN BUILDING BAND SAWS FOR PRINTERS

Write for complete details TODAY!

H. B. ROUSE & COMPANY
2214 North Wayne Avenue, Chicago 14, Illinois

ROUSE PRODUCTS...The Standard of the World Since 1899



The

Monomelt Hydraulic

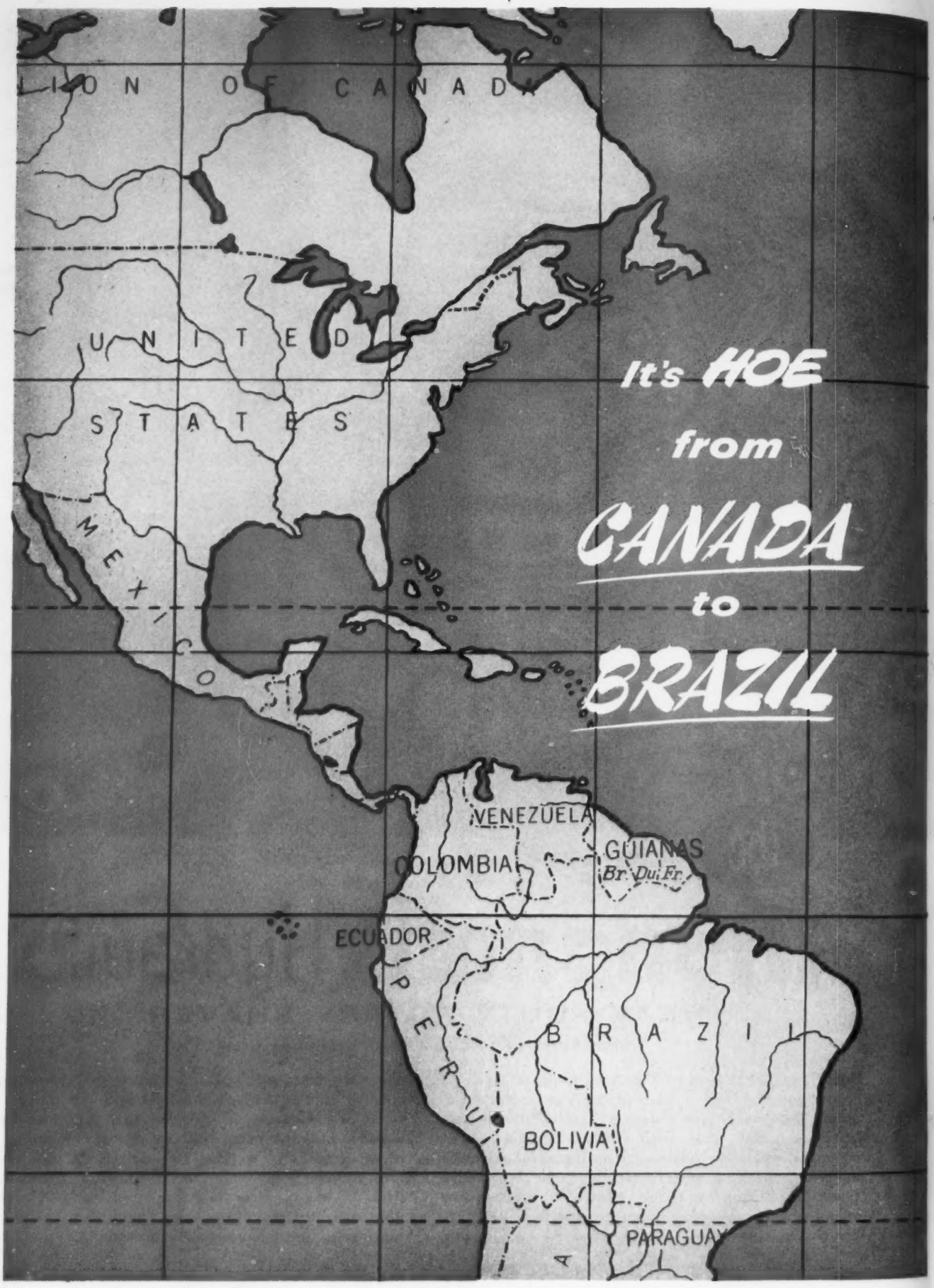
HEAVY-DUTY ROTARY SHAVER

WITH BUILT-IN VACUUM CHIP DISPOSAL UNIT

Every part of this rugged unit is designed for high production shaving of electros, stereos, metal base, plastic and wood. New, one-piece, heavy ribbed base casting . . . extra wide, hand finished travel ways . . . 19 finger separately adjustable spring actuated hold-down . . . positive modern machine tool-type wedge system for raising and lowering table . . . easy reading barrel type micrometer control, adjustable to .001″ . . . positive locking action . . . self-contained vacuum chip disposal system with portable container . . . secondary opening to bag with shut-off damper for plastic or wood chip disposal . . . positive hydraulic feed with variable forward speed and fast return . . . full page capacity to 17½″ x 22½″. . . . ten tooth, tool steel, rotary cutter head with Timken bearings . . . smooth feed . . . shaves accurately from .140″ to 1.000″. This unit easily maintained . . . easily adjusted . . . easily lubricated. Sensibly priced. Write today.

Manufactured by **THE Monomelt COMPANY, INC.**

1611 N. E. Polk • Minneapolis, Minnesota


It's HOE
from
CANADA
to
BRAZIL
VENEZUELA
COLOMBIA
GUIANAS
Br. Du. Fr.
ECUADOR
PERU
BRAZIL
BOLIVIA
PARAGUAY

That so many newspapers printing on HOE COLOR-CONVERTIBLE PRESSES are expanding their equipment is the strongest kind of testimony to the unsurpassed performance of the COLOR-CONVERTIBLE.

SOME RECENT ORDERS for
HOE COLOR-CONVERTIBLE Press Equipment

Toronto
Toronto Daily Star
Nine COLOR-CONVERTIBLE units. The *Star* already has 35 Hoe press units.

Halifax
Halifax Chronicle-Herald and ***Halifax Mail-Star***
An additional unit added to its 5-unit COLOR-CONVERTIBLE press.

Sydney
The Post-Record
Adds two additional units to its COLOR-CONVERTIBLE press.

Cleveland
The Cleveland Press
Four COLOR-CONVERTIBLE units. The *Press* already has 32 Hoe press units.

Newark
Newark Star-Ledger
Six additional units added to its present 6-unit COLOR-CONVERTIBLE press.

Philadelphia
The Evening Bulletin and ***The Sunday Bulletin***
Have recently ordered nine additional units to complete the equipment in their new pressroom that will total 72 HOE COLOR-CONVERTIBLE units and 14 HOE folders. Installed in two parallel lines, extending nearly a sixteenth of a mile, these will be the longest lines of newspaper press equipment in the world.

Louisville
The Courier-Journal and ***The Louisville Times***
An 8-unit HOE COLOR-CONVERTIBLE press.

Memphis
The Commercial Appeal and ***Memphis Press-Scimitar***
Have ordered six additional COLOR-CONVERTIBLE units to supplement their 12-unit Hoe press.

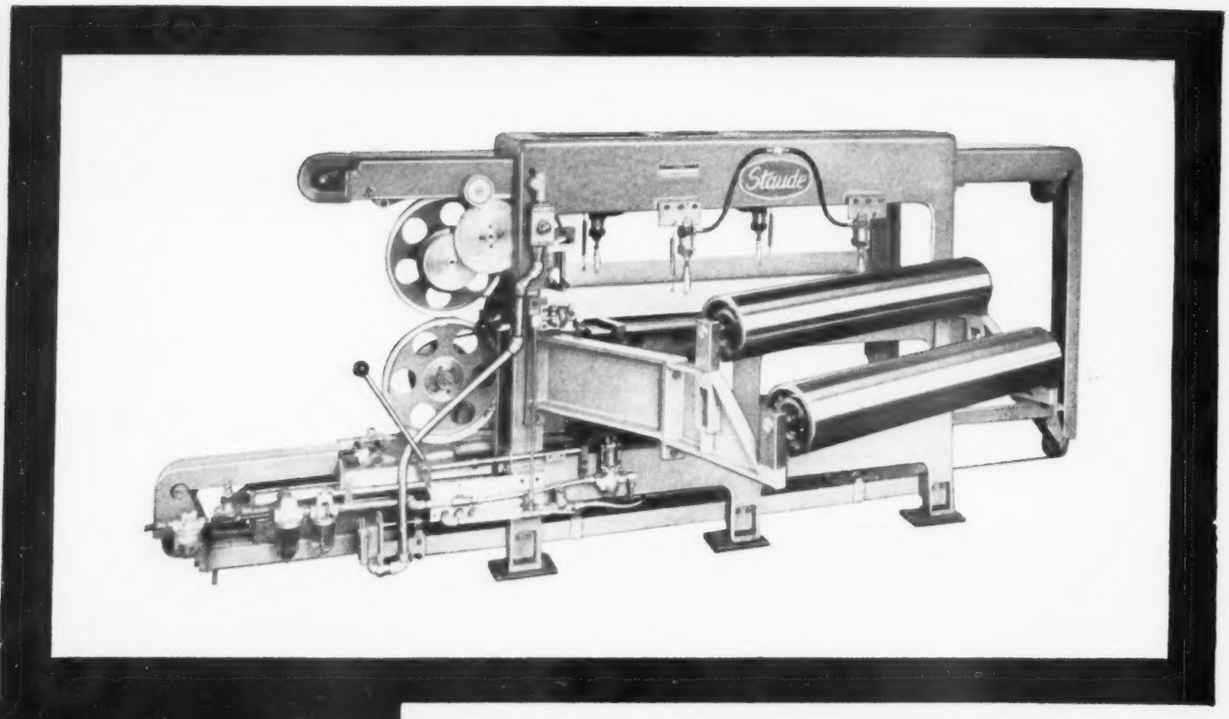
Rio de Janeiro
"O Globo"
Adds two HOE COLOR-CONVERTIBLE units to its present Hoe equipment.

Sao Paulo
O Estado de Sao Paulo
Orders an additional 4-unit HOE COLOR-CONVERTIBLE press.

1805 150th Anniversary 1955

R. HOE & CO., INC.

910 East 138th Street New York 54, N.Y.
BRANCHES: BOSTON • CHICAGO • SAN FRANCISCO
BIRMINGHAM • PORTLAND, ORE.



butt splices

IN LESS THAN A SECOND WITHOUT STOPPING YOUR PRESS!

Staude's Automatic Butt Splicer gives you:

- **Continuous, uninterrupted press operation . . . eliminates splicing downtime . . . increases production.**
- **Web waste limited to narrow splice area only.**
- **Designed for all web-fed paper board presses . . . handles webs up to 46".**

Staude's Automatic Butt Splicer keeps your presses rolling even while the web is being spliced. It works this way:

The Butt Splicer is placed in line between the roll stand and the press and straddles the web. When it is necessary to splice the old and new web, the splicer clamps them together . . . cuts both webs . . . removes waste ends . . . tapes old and new webs together top and bottom . . . makes a butt splice . . . releases clamps . . . *all in less than a second!*

During the splicing interval, the press is fed from a free loop. The Staude Butt Splicer can be used on any continuous web fed operation.

Get complete details on this big money saver . . . write for specifications.

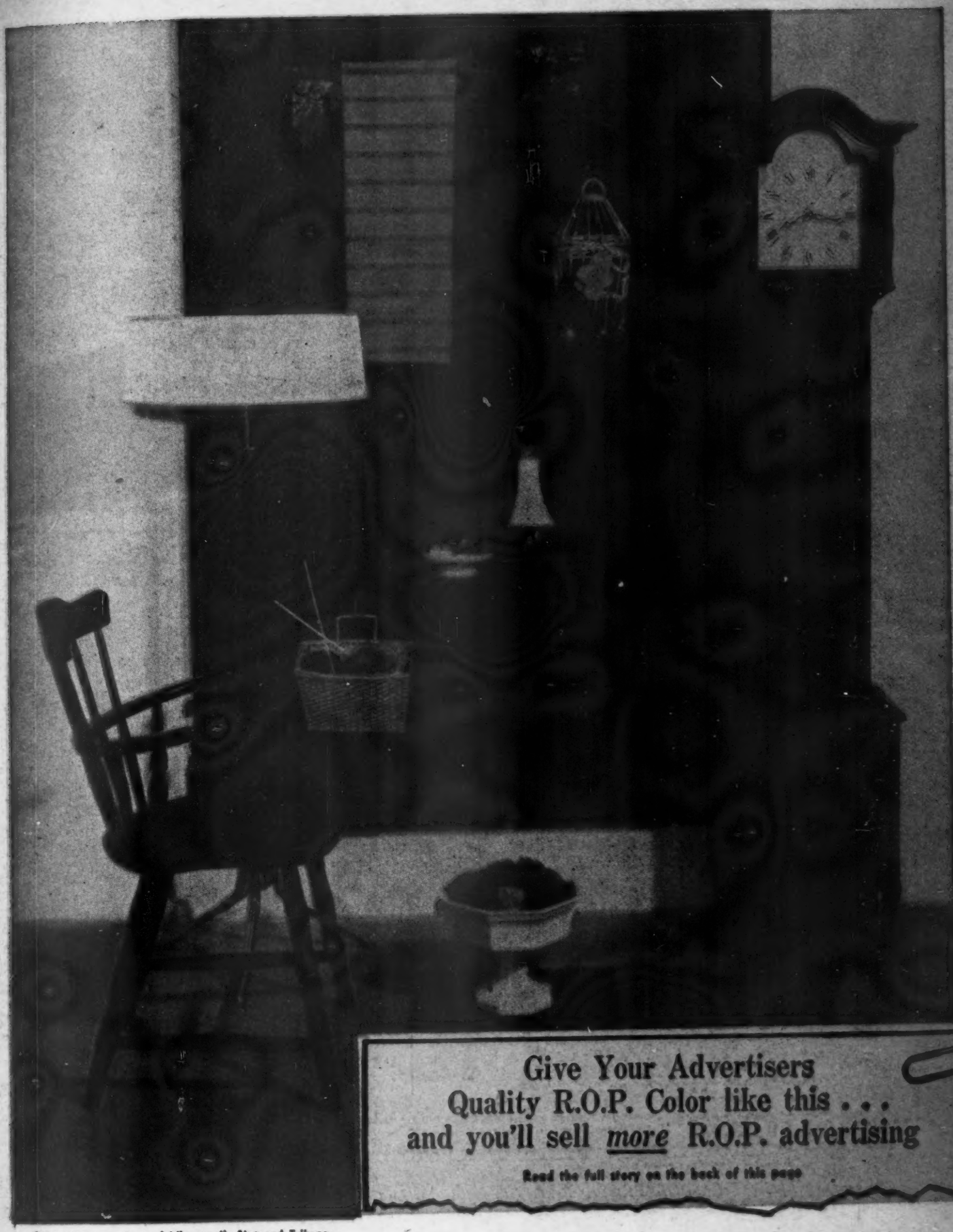
50th ANNIVERSARY

E. G. Staude MANUFACTURING COMPANY, INC.

2675 UNIVERSITY AVENUE • ST. PAUL 14, MINNESOTA

Eastern Office: **35 Beechwood Ave., Mt. Vernon, N. Y.**

LONDON REPRESENTATIVE: W. T. GIBBS, 33 FIRS DRIVE, CRANFORD, MIDDLESEX, ENGLAND



Give Your Advertisers Quality R.O.P. Color like this . . . and you'll sell *more* R.O.P. advertising

Read the full story on the back of this page

Color plates courtesy of Minneapolis Star and Tribune

OUR NEW R.O.P. ADVERTISING IS PRODUCING MORE SALES THAN ANYTHING WE'VE EVER USED BEFORE
CLEAN, SHARP COLOR SURE HELPED PUT THAT CAMPAIGN OVER . . .

Sharper, Cleaner Colors Will Sell More R. O. P. Advertising for You!

Quality reproduction in R.O.P.Color work increases advertising impact . . . makes your advertisers' campaigns *more* effective. "Spherekote" Blankets and Drawsheets assure the quality in color work that makes happy advertisers . . . the quality that advertisers expect when they pay color premiums.

In addition, millions of tiny glass beads give "Spherekote" blankets a hard, smooth surface that resists ink . . . reducing first impression offset. The solid, yet resilient surface lets you print with even, firm pressure. This means clean, sharp impressions for top-notch color quality, the quality that produces more color advertising for *your* paper.

But the proof is on *your* press! Try "Spherekote" blankets in your pressroom and *see* the difference in quality reproduction. Our Sales Representative in your area will be happy to furnish additional information at your request. Write: Minnesota Mining & Manufacturing Company, Dept. CI, St. Paul 6, Minnesota.

A PRODUCT OF "3M" RESEARCH

REG. U. S. PAT. OFF.

SPHEREKOTE

BRAND

BLANKETS
DRAWSHEETS
TYMPAN COVERS

Made by Minnesota Mining & Mfg. Co., St. Paul 6, Minnesota.
General Export: 99 Park Avenue, New York 16, N. Y. In Canada: P. O. Box 757, London, Ontario.

This insert printed on "SPHEREKOTE" Brand Blankets by the La Crosse Tribune, La Crosse, Wisconsin.

Get the big improvements

1st in mercury blankets

Today, as always, Rapid Roller Company operates America's finest and most modern blanket manufacturing plant, as well as one of the largest research laboratories in the Graphic Arts Industry. This manufacturing plant, located in Chicago, is staffed with the best skilled craftsmen in the field, thereby assuring that Mercury Blankets will always be the first with any major improvements and the highest in quality.

RAPID ROLLER CO.

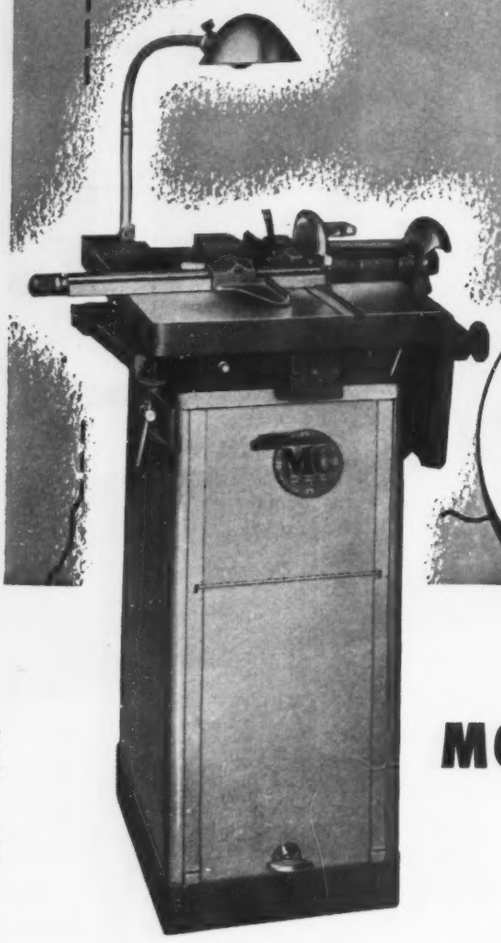
FEDERAL AT 26TH ST. • CHICAGO 16, ILL.

Eastern Office: 800 McCarter Highway • Newark 5, N. J.

IMPORTANT: THERE ARE *NO OTHER* RAPID ROLLER COMPANY BRANCHES OR FACTORIES.

OHIO NEWSPAPERS IN

WITH 71 MORRISON SAW TRIMMERS



MORRISON 3-A SAW TRIMMER

Top time-saver in the composing room, versatile, safe, accurate, fast, easy to use. Has accessories for a wide variety of operations, including Miter and Line-Up Gauge, Any Angle Gauge, Saw Blade Grinding Attachment, and many others.

These important Ohio newspapers in Cleveland, Cincinnati, and Columbus have standardized on MORRISON SAW TRIMMERS. The reason, of course, is that through the years Morrison Saw Trimmers have consistently proved their ability to handle the work of sawing, trimming, mitering, angle cutting in greater volume, with greater ease, safety and at lower cost. They're paying their way in work-savings, composing room profits. If you have not already proved this in your plant, get the details today!

Write for catalog on:

- Model 3-A Saw Trimmer
- Model 45 Saw Trimmer
- Special Bench or Cabinet Models for Smaller Shops
- Morrison Slug Strippers
- Morrison Plate Bevelers
- Morrison Router and Type High Planer

Symbol of Operating Economy

THE *Morrison* COMPANY

PRECISION MACHINES FOR THE GRAPHIC ARTS INDUSTRY

125 W. Melvina Street, Milwaukee 12, Wisconsin

"WE REGISTER... WE'RE SHARP!"

say these Famous NEA Comic Stars

"They're sharp because our DIRECTOMAT* produces four-color comic mats in perfect register"

adds HERBERT W. WALKER,
Vice-President & General Manager of NEA Service, Inc.

"With our Lake Erie Directomats," Mr. Walker relates, "we obtain the finest possible reproduction of NEA comics for our clients . . . the 1200 daily and Sunday newspapers we serve." This experience of Mr. Walker is shared by the leading newspapers in R.O.P. color — 7 out of 10 leaders use Directomat direct pressure mat making equipment for their color mat production. Nearly 300 Directomats are now serving newspaper and commercial plants. Let us tell you how the Lake Erie Directomat may serve you too.
Send for Bulletin 349 ➡

*NEA's first Directomat saved on production time and performed so well on four-color work that a second Directomat was recently installed. The new Directomat turns out 800 sets of daily comic strip mats every day.

LAKE ERIE ENGINEERING CORP.

General Offices and Plant
568 Woodward Avenue, Buffalo 17, New York
District Offices in NEW YORK • CHICAGO • DETROIT • PITTSBURGH
Representatives in Other U. S. Cities and Foreign Countries

● Leading manufacturer of hydraulic presses — 3,500 designs from 5 to 22,000 tons capacity — newspaper mat molding . . . rubber and plastic printing plate molding . . . plastics molding . . . laminating . . . die sinking . . . metal working . . . forging . . . metal extrusion . . . wallboard and plywood . . . rubber vulcanizing . . . die casting and special purpose.

LAKE ERIE ® DIRECTOMAT ®

LAKE ERIE
HYDRAULIC PRESSES

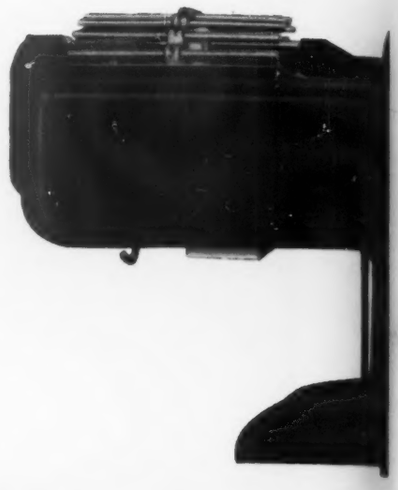
Superior in Performance...

THE NEW HEAVY DUTY PONY

6 reasons better

Large newspapers, confronted with the problem of color printing, or small newspapers unable to meet steadily increasing production schedules, should talk with a Wood engineer about the advantages inherent in our NEW Heavy Duty Pony Autoplate.

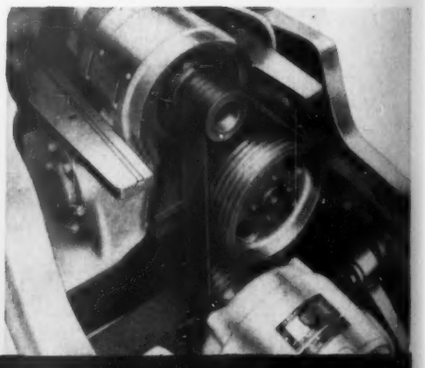
Let us tell you how . . . and why . . . this precision machine produces better plates, F-A-S-T-E-R, than any other model. And, we'll show you *why* it will continue to do this, day after day, under the stress of the heaviest production schedule. Its built-in features pay off in higher production and more uniform plates.



Send for full information

1

2



3

IF IT'S Wood IT'S GOOD

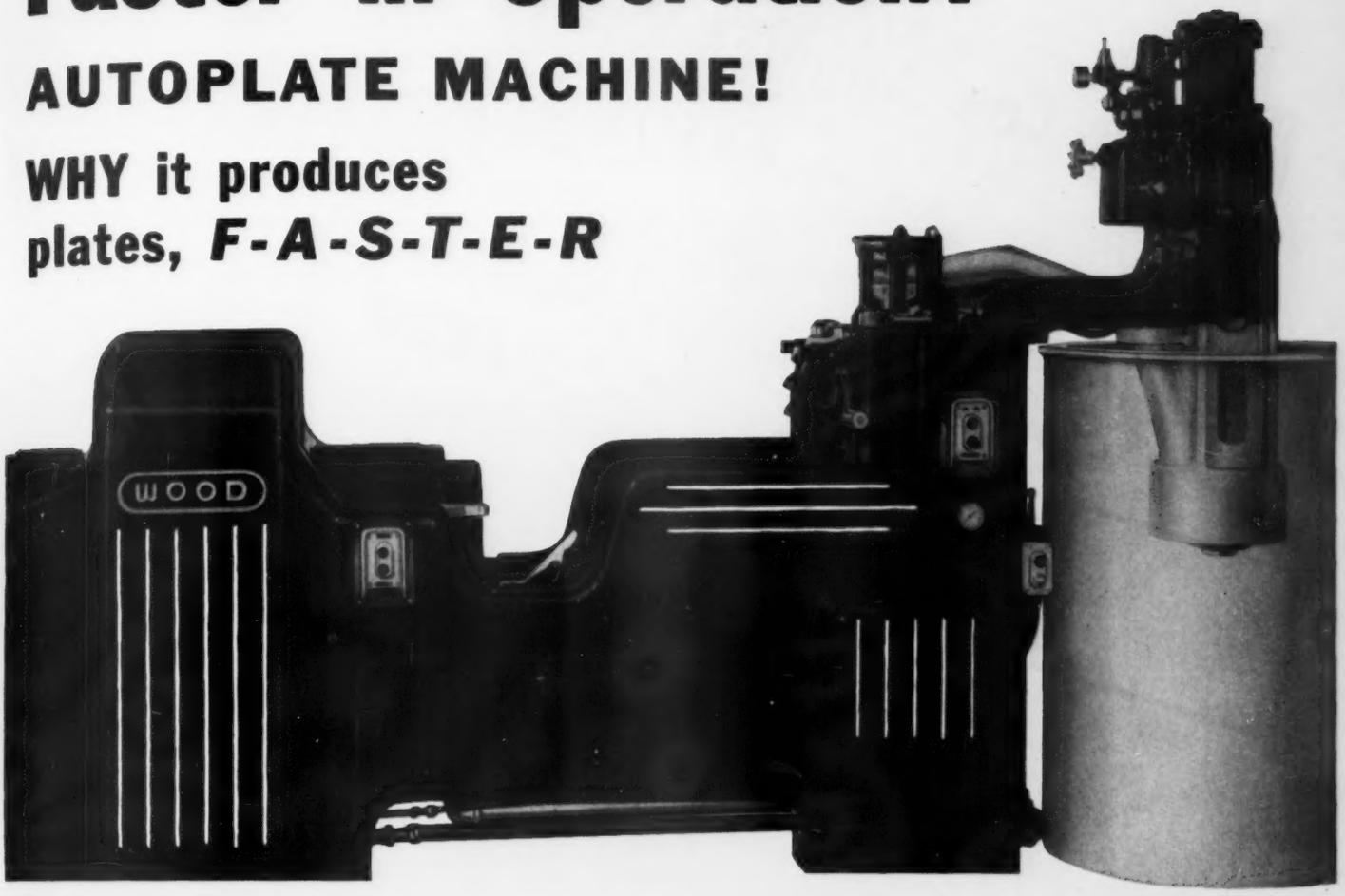
WOOD NEWSPAPER

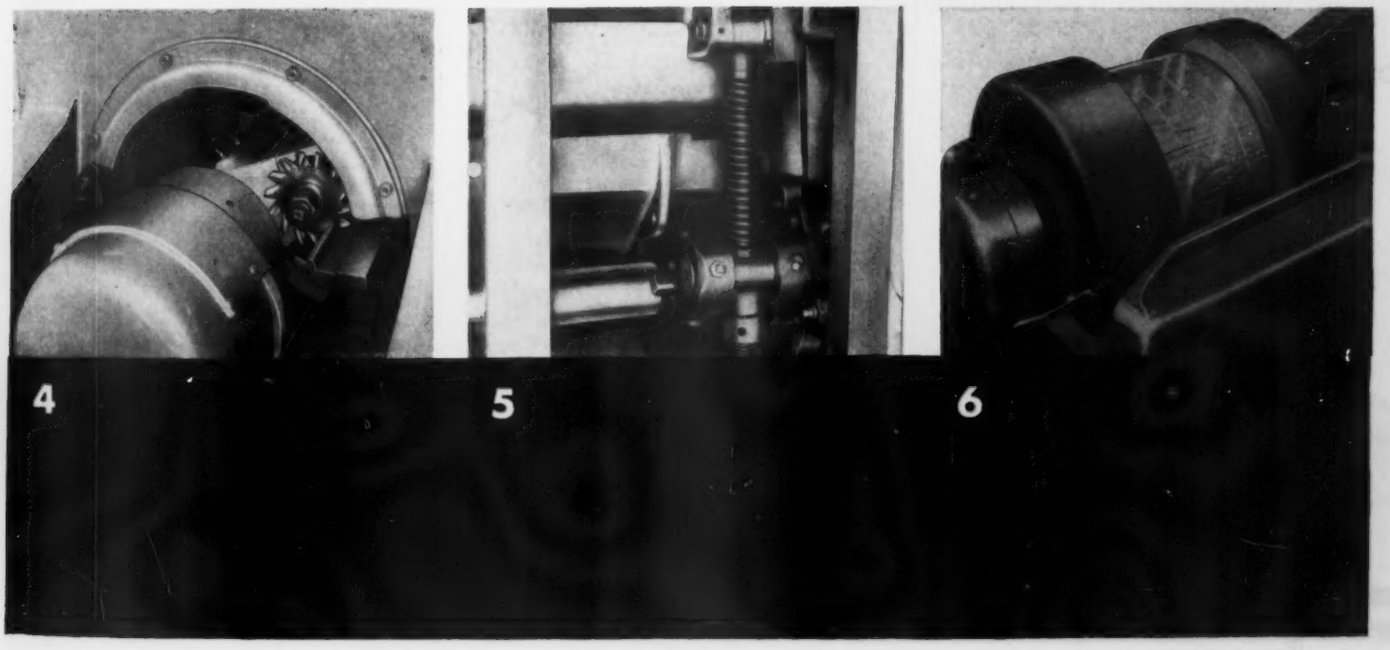
PLAINFIELD, NEW JERSEY • EXECUTIVE AND

Faster in Operation!

AUTOPLATE MACHINE!

WHY it produces plates, *F-A-S-T-E-R*





MACHINERY CORPORATION

SALES OFFICE; 501 FIFTH AVENUE, NEW YORK 17, N. Y.

Los Angeles Times
PART I
Armed Man Held After Nixon Call
Appointment With Vice-President Demanded by Studio City Resident
Wolfson Admits Losing Fight to Seize Wards
Says He'll Try Again Next Year
FINAL
The Mirror Daily AND News
Clean Up Cash
CHOU MAKES PEACE BID
Blast Hurts 33 Marines, Rips Hall
Reds Offer Settlement for Price of Bandung
Reds Request Big 4 Meet on Austria Pact
HOE

Los Angeles Times-Mirror Company orders 16 more

—HOE COLOR-CONVERTIBLE— PRESS UNITS

In the pressroom of its magnificent building, the Times-Mirror Company is now using sixty-four COLOR-CONVERTIBLE units – in two 32-unit lines – for the production of the ***Los Angeles Times*** and ***The Mirror-Daily News*** – plus a 26-cylinder Hoe Multicolor Press for printing the ***Times*** Sunday comic sections. In another plant eight additional Hoe press units, with specially designed folders, are used for printing telephone directories.

With the circulation of the morning ***Times*** averaging over four hundred twenty-five thousand copies daily and in excess of eight hundred twenty-five thousand on Sundays, and the afternoon ***Mirror-Daily News*** running over three hundred thousand daily, the installation of an additional 16-unit line of COLOR-CONVERTIBLES will be needed to provide for the continually expanding circulations of these outstanding West Coast newspapers.

R. HOE & CO., INC.

910 East 138th Street New York 54, N. Y.
BRANCHES: BOSTON • CHICAGO • SAN FRANCISCO
BIRMINGHAM • PORTLAND, ORE.

Equipment & Supplies

(Continued from Page 28)

proof is removed from its bearings and laid to one side. The proof is dusted with lampblack.

The four punching arms are now returned to their positions over the key plate with the register pin punches resting lightly on the plate in their predetermined positions. The pin punches are each tapped lightly with a hammer. The punch pin holders are again turned out of the way as shown in Fig. 1.

For the drilling operation, the two side bar slides shown in lowered position in Fig. 1 are brought up to vertical position as shown in Fig. 3. The motor which drives the register drill is slidably mounted on two bars at an angle of 90 deg. to the side bar

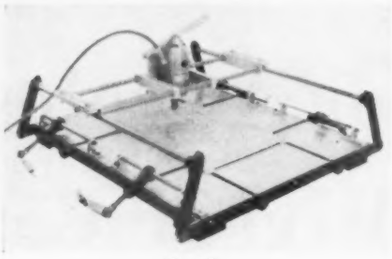


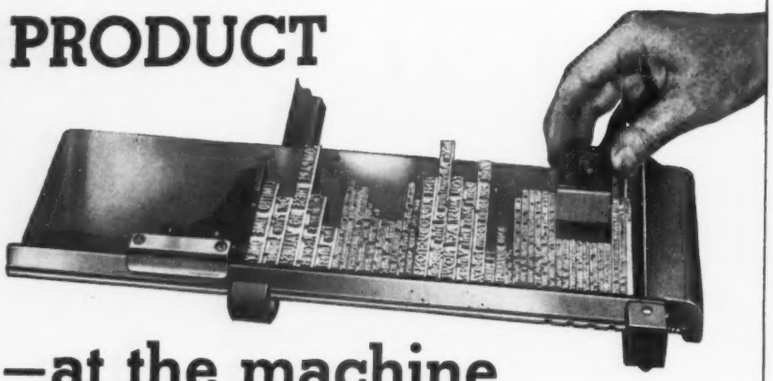
Fig. 3.

slides to permit locating the register drill at any point on the plate. The electric drilling unit is placed with its frame on the side bar slides as shown in Fig. 3. The drill is located centrally in each punch mark in the key plate and the holes drilled through the plate. The black plate is now removed and one of the color plates is placed in position on the base bed in the same position as the key plate.

The frame bearing the proof of the key plate on the Plexiglas sheet is lowered on the color plate. The two side bar slides are again raised to vertical position and the illuminated magnifying glass unit shown in Fig. 2 is placed on the side bar slides. While watching the plate through the magnifying glass, the adjusting screws at the outer edges of the base are used to register the color plate in position with the proof on the Plexiglas sheet.

After the color plate has been registered with the proof of the key plate through the transparent Plexiglas sheet, the illuminated magnifying unit is removed, the proof frame is raised up out of the way, the two side bar slides are laid back, the punches are again brought into position so the pin punches rest lightly on the color plate, the punches are each tapped with the hammer. The punches are laid back again, the side bar slides are brought up into position to support the electric drilling unit and the holes for the first color plate are drilled. The process is repeated for the remaining color plates in the set. For more details please mention PEE No. 424 in your request.

FINISHED PRODUCT



—at the machine

Each slug drops to the galley of a Mohr Saw-equipped Linotype or Intertype accurately sawed to length —ready for immediate use "as is."

The finished product is instantly available. Any odd measure matter can be sawed to length right at the machine—run-arounds, initials, contours, ad-guts, job work, corrections.

Just set the Mohr Saw dial at 10 picas, 20 picas, 25 picas 3 points—or to any measure. The slug is sawed automatically, instantly, accurately.

Save liner changes, reduce liner investment and expense. Cast slugs to a standard 30 picas and automatically saw them to length. On combination machines a liner can be used for text, while retaining the flexibility of the full 30 picas for display.

Thousands of Mohr Saws are saving time and money in composing rooms all over the world—daily newspapers, weekly newspapers, job plants and trade plants. If you have slugs to saw—whether for one or one hundred line casting machines—the Mohr Saw is a real money-maker.

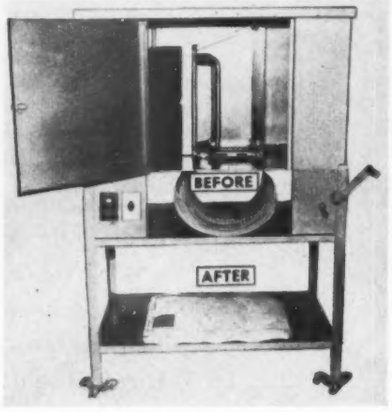
Learn the complete story of the Mohr Saw.
Write for the free booklet "Any Measure."

MOHR LINO-SAW COMPANY

8015 North Ridgeway, Skokie, Illinois

Stereotype Mat Flattener

The Flato-Mat, manufactured by Flato-Mat Co., was recently introduced for the flattening of stereotype mats after plates have been cast from them for convenient filing and savings in storage space. In one



operation up to 100 mats are flattened by compression in conjunction with automatic electric heat without injuring reproduction qualities, it is claimed. The Flato-Mat is 40 in. long, 28 in. wide, 61 in. high and weighs about 550 lbs. Features of the Flato-Mat are single operating handle, electric timer and two 500 w. heaters requiring 110 v. For further information please mention PEE No. 407 in your request.

Six Probe Ultra-Viscoson

A model of the Ultra-Viscoson equipped with six probes has been reported by the Cincinnati Div., Bendix Aviation Corp. The unit is designed for automatically maintaining the proper mixture of ink in gravure printing. It controls the color quality of printing inks by sensing any change caused by evaporation of solvents, or temperature and humidity variations. A probe, immersed in an ink reservoir, will activate the system which will automatically add the

(Continued on Page 46)

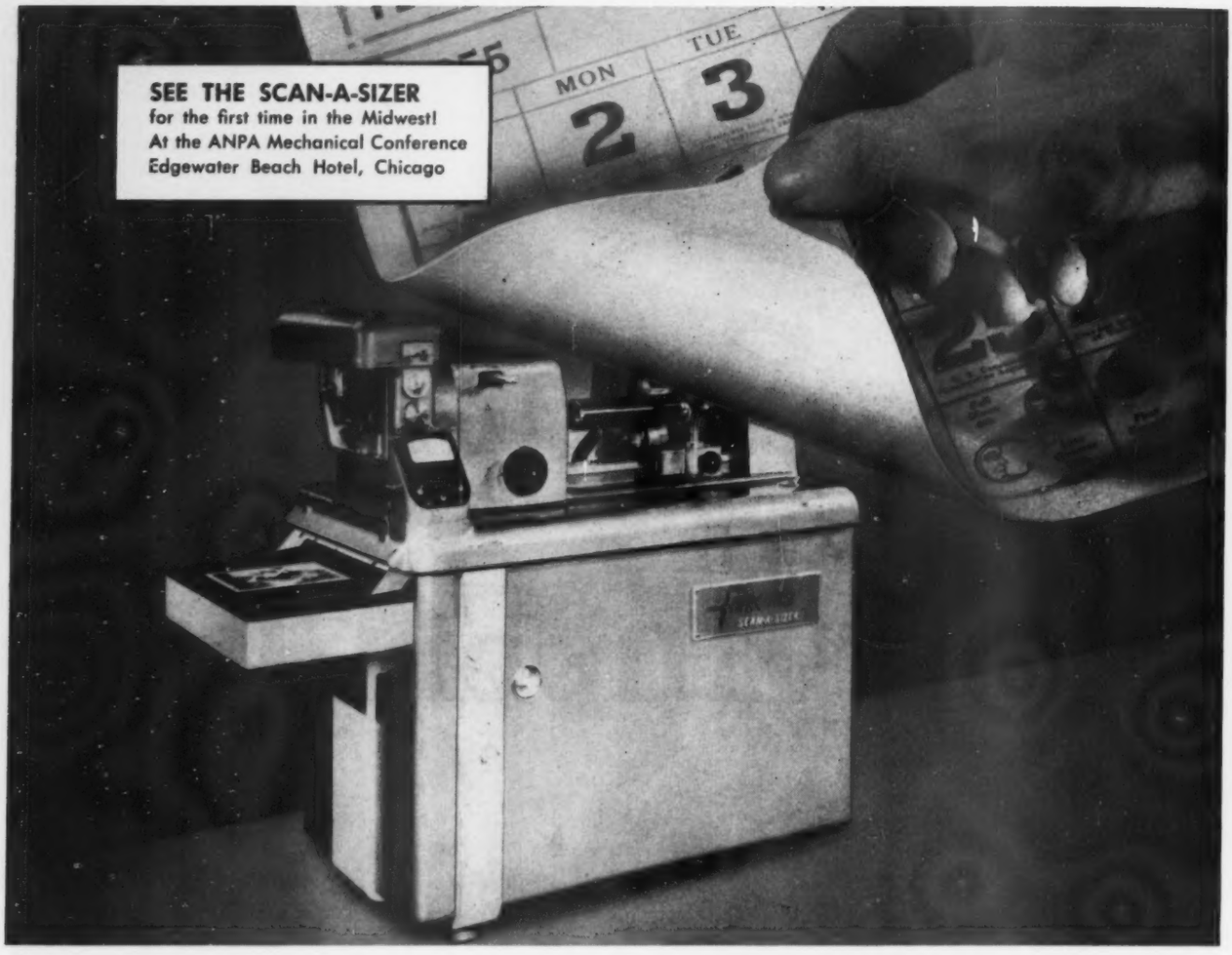
With Imperial Type Metal and Imperial Service you are always sure of metal uniformity — free from the extra costs of imperfect casts, machine shutdowns and other production losses for which type metal deterioration is frequently responsible.

You will profit by asking for full details. Write to nearest address below.

IMPERIAL TYPE METAL COMPANY

SERVING THE GRAPHIC ARTS *Exclusively*

CHICAGO 50 • NEW YORK 7 • PHILADELPHIA 34



FAIRCHILD reports progress on new electronic engraving equipment

Later this year newspapers and others will be using pilot models of the SCAN-A-SIZER® machine to enlarge or reduce photo copy as much as 4½ times while engraving 85- or 120-line cuts up to 13⅜" x 16½". It will produce high quality plastic halftones at low cost from photos or mounted art up to 18" x 22½".

The Variable Response Unit, which is now undergoing a full-scale program of tests and experiments, will aid in compensating for variations in photo copy and mechanical media by varying tonal values and dot structure *during the engraving process.* New Tandem-rigs for SCAN-A-GRAVER® machines that permit simultaneous double-plating from one piece of copy are now in production. Color electronic engraving? . . . Fairchild has already made good color plates in the laboratory. A definite announcement about its commercial application will be made in the future!

A six year record . . .

Fairchild entered the graphic arts field in 1949. Today, the SCAN-A-GRAVER is used by the majority of small and medium-sized daily and weekly newspapers in the U. S. and Canada. Now, the significant new advances outlined above definitely establish Fairchild electronic engraving even more widely in the graphic arts. You will see that the year 1956 will be a continued period of even more dynamic growth!

• For more information on Fairchild electronic engraving machines that make low-cost halftones right in your own plant, write Fairchild Graphic Equipment, Inc., 88-06 Van Wyck Expressway, Jamaica, N. Y., Department 100-10E.

FAIRCHILD
GRAPHIC EQUIPMENT, Inc.

LOOK OUT, FIRE!

TWO OF THE GREATEST NAMES IN FIRE PROTECTION HAVE JOINED FORCES

PYRENE and C-O-TWO, world-renowned manufacturers of approved fire protection equipment, are now unified under the same management to give you the finest and most complete line on the market today . . .

- ★ **built-in fire detecting systems that quickly respond to smoke, heat or flame . . .**
- ★ **all types of portable fire extinguishers and built-in fire extinguishing systems that kill fire fast . . .**
- ★ **plus an expert fire protection engineering service that gives you unbiased advice on what is best for your particular fire hazards.**

Don't take unnecessary chances . . . the combined fire protection experience of PYRENE and C-O-TWO over the years is at your disposal without obligation. Get complete facts today!

Pyrene

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Sales and Service in the Principal Cities of United States and Canada

C-O-TWO

COMPLETE FIRE PROTECTION

portable fire extinguishers . . . built-in fire detecting and fire extinguishing systems

CARBON DIOXIDE • DRY CHEMICAL • VAPORIZING LIQUID • SODA-ACID • WATER • CHEMICAL FOAM • AIR FOAM

Save Time at the Camera, in Printing Frames,

WITH ANSCO REPROLITH ORTHO TYPE B FILM

You'll find that production per hour in your shop goes up sharply when you use this famous Ansco film. That's because its higher speed permits shorter exposures in all types of photo-mechanical work.

In addition, the full orthochromatic color sensitivity of Reprolith Ortho Type B allows the use of filters to improve the rendition of copy, thereby reducing the need for handwork on negatives. And exposures are relatively shorter at all times, with or without filters.

These outstanding qualities also are accompanied by others which you'll find in all of Ansco's Reprolith Films—high resolving power . . . fine dot-etching properties . . . clarity in white areas . . . wide developing latitude.

Your plant automatically becomes more efficient when you use Reprolith Ortho Type B Film. Try it and see what a difference it makes in your cost-production figures.

For best results in development rely on Ansco Reprodol Developer. Produces maximum density and contrast, cuts developing time. Packed in laboratory-mixed units making 2 and 10 gallons of solution.

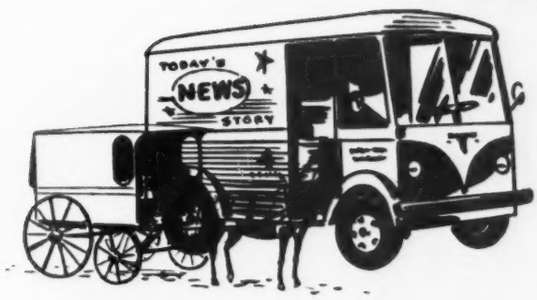
ANSCO, Binghamton, N. Y. A Division of General Aniline & Film Corporation. *"From Research to Reality."*

PAPER MANUFACTURERS COMPANY · PHILADELPHIA · 50 YEARS OF PERFECTION 1905 1955

GUMMED LABEL PAPERS · PHILADELPHIA · MANUFACTURING PLANTS · INDIANAPOLIS · ROLLS FOR COMMUNICATIONS AND BUSINESS MACHINES

50 Years of Leadership

FOR HALF A CENTURY PERFECTION COMMUNICATION PAPERS



PERFECTION
will be at the
ANPA MECHANICAL CONFERENCE
CHICAGO
June 6, 7, 8
BOOTH 13

HAVE BEEN SERVING AMERICAN NEWSPAPERS

TO *Perfection*

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COMMUNICATION PAPERS

PERFECTION

Adding Machine
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Bank Proofing
Clock Recording
Computing
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Folder Recording
Gummed Papers
Gummed Tape
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Perfection® IS YOUR PROTECTION

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Sales Representatives: Atlanta • Chicago • New York • Cleveland • Los Angeles • Kansas City, Kans.
Pacific Coast Warehouses: Los Angeles • San Francisco Plants: Philadelphia • Indianapolis

When the Occasion Arises . . .

think of your Wood Flong representative

When any problem comes up that involves getting something extra out of your dry mats, remember there's a Wood Flong representative in your area ready and anxious to serve.

You'll find him sympathetic with your task of always striving for the most faithful kind of reproduction. He's well qualified to give you counsel since he knows what qualities are needed to obtain a particular result.

And in offering you this help, he is backed by an organization that has a long tradition, forty years, of producing Wood Dry Mats at a quality level that keeps pace with the exacting demands of faithful reproduction.

WOOD FLONG CORPORATION *Oldest In The Country*

WOOD DRY MATS
ALWAYS UNIFORM

HOOSICK FALLS • NEW YORK *First In The Field*

NEW YORK CITY OFFICE: 551 FIFTH AVENUE • NEW YORK 17, NEW YORK

Equipment & Supplies

(Continued from Page 40)

correct amount of solvent to restore the color to the desired shade. For more details, please mention PEE No. 427 in your request.

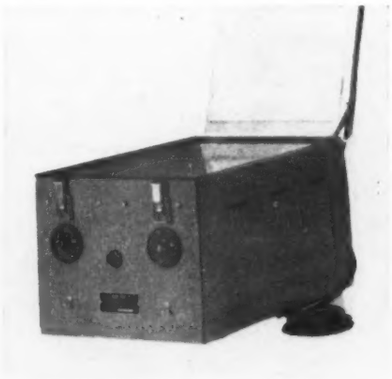
Materials Handling by Trackage

The Epco Double Trackage System for moving skids and pallets has been announced by the Engineering Products Co., Inc. The new system is an adaptation of the original single Epco Trackage System used in paper mills and corrugated box plants to handle heavy paper rolls. The rolling function is provided by the Epco trackage itself which consists of a series of rollers, containing sealed ball bearings especially designed for floor operation. The flat stock load is carried on a flat bottomed dolly which glides over the track rollers when pushed by one man. The legs of the skids are actually runners, one on each side. The trackage can be installed into loading docks, scales, elevators, pressrooms, or wherever required. In pressrooms, a skid of paper can be spotted at the press feeder, remove the skid from the press delivery and then roll it on to the next operation. Turntables are used to change direction. The trackage is placed flush in the floor, with tops of the rollers just above heavy steel safety treads. Foot and truck traffic can cross at any point. For further information, please mention PEE No. 439 in your request.

In this packaging department, the loaded skid is being pushed from the wire tying machine at the end of packing line to the loading dock.

Offset Negative and Plate Machine

Recently introduced by the Kon-Tac Company is the Kon-Tac Negative and Plate Maker which may be used by the offset printer for making various types of offset negatives and plates. Various types and thicknesses of copy may be exposed in the machine by either the direct or reflex method, producing paper or film negatives. From the negatives, offset plates are burned in. Sponsor states the processing steps, from original copy to finished offset plate, takes 30 min. To compensate for varying thicknesses of paper in the original copy, whether exposed by the direct or reflex method, a



(Continued on Page 52)

AAAA-ANPA APPROVED R. O. P. COLORS

Mechanically progressive minded newspapers have been following the rainbow trail of Sinclair & Carroll Color Book inks to improved reproduction of advertisers' copy.

These AAAA - ANPA approved colors enable you to faithfully reproduce color copy in as little time as it takes you to replate for late news. By cross-mixture you have available every color of the rainbow. And you minimize waste because you mix only enough ink for the day's run.

SINCLAIR & CARROLL's Color Book illustrates (*) the newly approved AAAA-ANPA color standards. Let it be your guide to improved newspaper R.O.P. color reproduction.

***(Color proofs of Rose and Cerise available on request).**

SINCLAIR & CARROLL Co., Inc.

440 W. Superior St.
Chicago 10, Illinois

591 Eleventh Avenue,
New York 36, N. Y.

Shoot to Stop

high production costs

time consuming methods

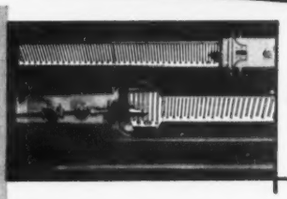
operator fatigue

with the CHEMCO MODEL F ROLL FILM CAMERA

With the Chemco Model F *Roll Film* Camera, you save from 12.2% to 21.4% of the cost of sheet film.

The CHEMCO Model F Camera permits the operator to shoot an entire series of exposures without a single trip to the dark room and gives precision negatives faster and easier. It houses three rolls of any width or combination of widths of film at the same time, with each roll having its own control and length counter dial.

All controls are operated from outside the darkroom.



Scale focusing system enables operator to achieve quick and precise focusing without using ground glass.

With the Chemco Side Arm Diaphragm Control the operator simply finds the scale number on the indicator arm in his line of vision and sets it to the desired F/stop on the precisely calculated curves related to the bellows extension. The lens is ready for the exposure.

Optional sheet vacuum back provides film selectively.

Adaptable for Mercury or arc lights to meet individual requirements.

Spring loaded copyboard swings effortlessly into loading or shooting position — holds itself in place.

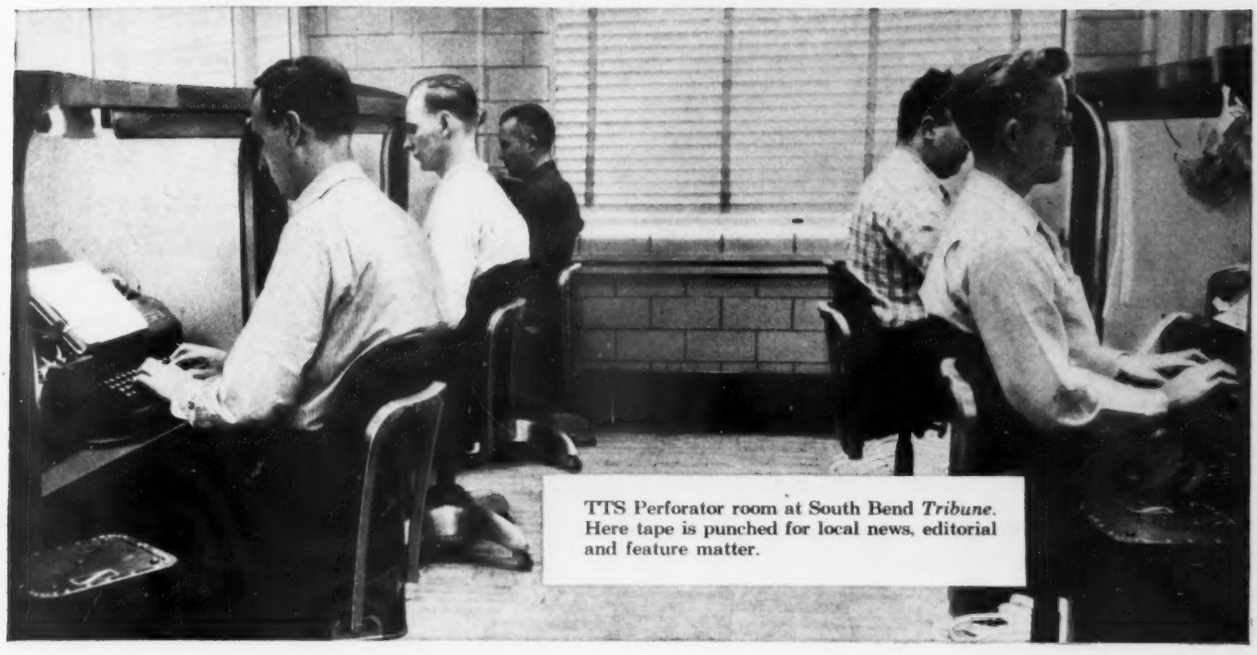
IF IT'S chemco IT'S BEST FOR PLATEMAKING

chemco PHOTOPRODUCTS COMPANY, INC. GLEN COVE, N. Y.

ATLANTA BOSTON CHICAGO DALLAS DETROIT NEW ORLEANS NEW YORK

South Bend (Ind.) TRIBUNE reports:

TTS PERFORATOR OPERATORS AVERAGE 2800 LINES PER SHIFT



TTS Perforator room at South Bend *Tribune*. Here tape is punched for local news, editorial and feature matter.

Before a Teletypesetter system was installed on the South Bend (Ind.) *Tribune*, each compositor set manually between 1200 and 1700 lines per day. Now, the same men, working the same 7¾-hour shift with TTS, each produce between 2600 and 3000 lines per day. That's almost twice as much!

TTS–OPERATED INTERTYPES AVERAGE TWELVE LINES PER MINUTE – Specially arranged Intertype machines geared for TTS production are now actually turning out 12 lines per minute! Production Manager George Kunz points out that the sustained high-speed production made possible by the addition of TTS has enabled the Tribune to 1) bring out bigger papers 2) absorb the additional cost of composing a locally edited Sunday magazine section 3) get out numerous special editions . . . all without additional overtime in the composing room!

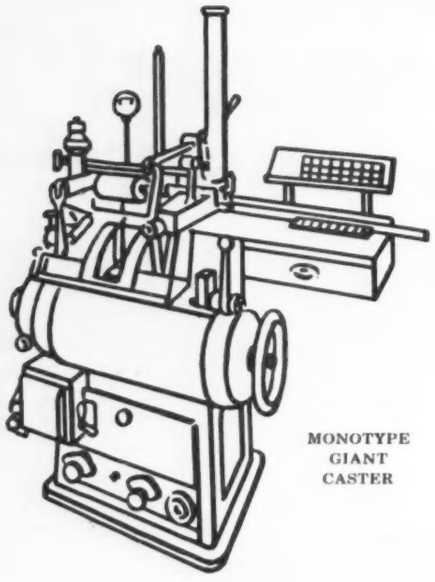
The *Tribune's* biggest weekday edition runs about 56 pages. While they haven't completely licked the high cost of production (much of the remaining trouble is due to the high price of paper), Mr. Kunz says, "At least, we know where we're going!"

For the full story on the South Bend *Tribune*, with specific ideas on how to get the most out of a TTS setup, just write Teletypesetter Corporation, Dept. PE6, 2752 North Clybourn Avenue, Chicago 14, Illinois.

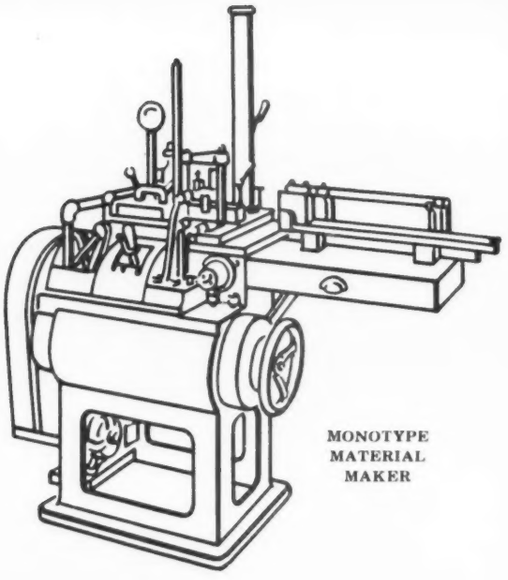
A competent touch-typist can quickly learn to punch tape on a TTS Perforator. A beginner should start to produce useable tape a day or two after first instruction.

TTS Operating Unit produces a continuous flow of type automatically, without interfering with normal manual operation of line-casting machine.

TELETYPESETTER



MONOTYPE
GIANT
CASTER



MONOTYPE
MATERIAL
MAKER

MONOTYPE NON-DISTRIBUTION

Non-Distribution is the system devised by Monotype in 1915, after the display type caster and the lead-slug-and-rule maker were brought out. The name is exclusively a Monotype property, although it is misused occasionally. The system is based on the sure fact that it costs less to make all type and material on a Monotype than it does to break up a page and put all display and spacing back into cases and racks. It costs less than to set and distribute, set and distribute, set and distribute a line at a time of matrices—and then mill off the top, and underpin. It can be shown that no other way of handling the ad room compares with the Non-Distribution System. Nothing else equals it for smooth working. Where the Non-Distribution System is in use, every hand compositor works straight through on production. He sets type—single type—and spaces it properly. This is as he was trained to do when an apprentice. This is what he does naturally and efficiently.

LANSTON MONOTYPE MACHINE COMPANY

Twenty-fourth and Locust Streets, Philadelphia 3, Pa.

Monotype Company of Canada Ltd., Toronto

Offices in Five Principal Cities—Warehouses in Three

Booths 18, 19 — A. N. P. A. Mechanical Conference

Set in Century School Book, 20th Century Extrabold, 20th Century Ultrabold Extended

A FRIEND

to rely on

AN ADDRESS

to write down

Whether it is a matter of supply, of counsel, or of proper equipment, if it pertains to dry mats, the man to see is the Certified field man for your territory . . . While you think of it, get out your note book or go to your bulletin board and write down his full name and address from the list below . . . He is selected for familiarity with dry mat subjects, his resourcefulness sharpened by much contact with problems such as yours . . . Big plant or small, newspaper or commercial, rely on the Certified Man.

C. R. BORCKARDT
3114 Berkshire Road
Cleveland Hts. 18, Ohio

E. J. COOK, Jr.
46 Belvidere Street
Springfield 8, Mass.

H. W. HAMILTON
Certified Dry Mat Corporation
555 Fifth Avenue
New York 17, N. Y.

E. F. PEARSON
1137 Iranistan Avenue
Bridgeport 5, Conn.

L. E. PRICE*
P. O. Box 98
Natural Bridge, Va.

HENRY LEVY
576 Seymour Street
Vancouver, B. C., Canada

R. ROBINSON
3106 S. W. 12th Street Place
Des Moines 15, Iowa

BEN A. ROTH
2361 Knight Way
Sacramento, Calif.

JOE NATOLIS
2754 S. W. 12th St.
Miami, Fla.

W. E. BOOTH COMPANY, Ltd.
12 Mercer Street
Toronto 2B, Ont., Canada

W. E. BOOTH COMPANY, Ltd.
480 Laguachetiere St., W.
Montreal, Que., Canada

*On temporary leave of absence due to health.

CERTIFIED DRY MAT CORPORATION
555 Fifth Avenue Dept. M. New York 17, N. Y.

For dependable stereotyping
rely on Certified Mats

Certified DRY MATS

THAT COMMERCE MAY BE SERVED
GA
Serving
MIDWEST PRINTERS AND PUBLISHERS SINCE 1877

Management-Consultants to the Graphic Arts

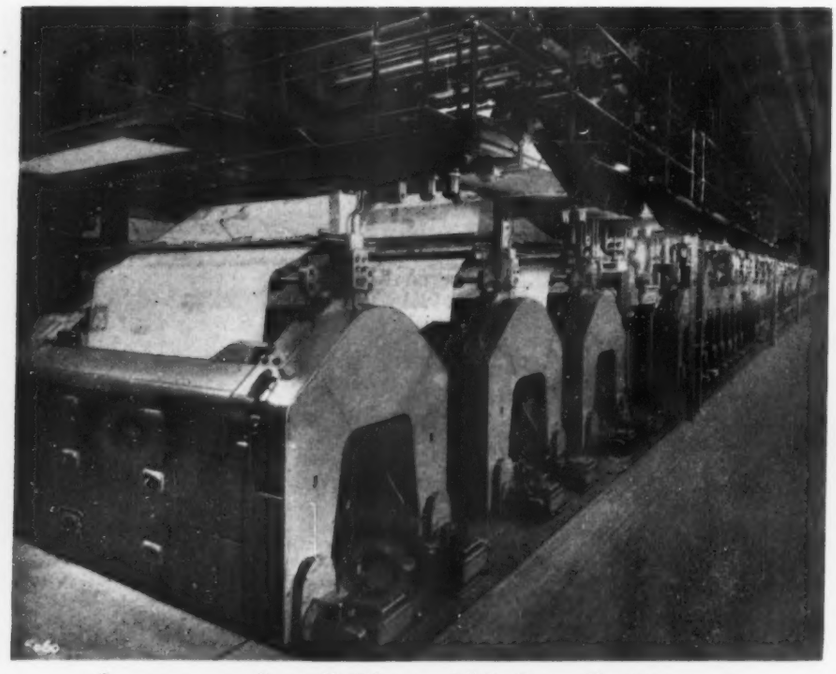
APPRAISALS
PERSONNEL PLACEMENT
SALES PROBLEMS
BUSINESS REORGANIZATIONS
PLANT LAYOUTS
LABOR RELATIONS
PRODUCTION PROBLEMS
COST SYSTEMS

Write for our new brochure explaining our many personalized services in detail. No obligation.

YOU CAN DO IT ALONE . . . BUT IT'S EASIER THE GRAPHIC ARTS WAY!

GRAPHIC ARTS INDUSTRY, INC.
1105 Currie Ave. • Minneapolis 3, Minnesota
A NON-PROFIT ORGANIZATION

SOLD BY
Western Newspaper Union
E. C. Palmer & Co.
Harry W. Brintnall Co.



Large or Small They ALL Run Better on
ALBANY LUBRICANTS
Send for Bulletin No. 10 Press Room Lubricants
ADAM COOK'S SONS. INC.
Mfrs. of Lubricating Products since 1868 LINDEN, NEW JERSEY

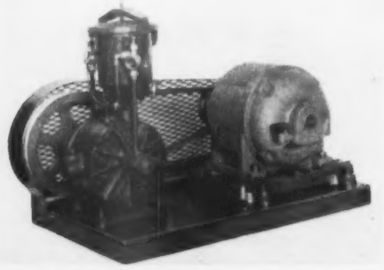
Equipment & Supplies

(Continued from Page 46)

variable light source is provided by selectable timers and toggle switches on the front of the cabinet. The Kon-Tac unit also serves as a light and opaquing table with the opal glass surface used for opaquing and masking negatives. Measuring 21 in. by 14 in. by 12 in., the machine weighs 80 lbs. and is operated from a 110 v., a.c. source. For further details, please mention PEE No. 415 in your request.

Electric Air Pumps

Leiman Brothers, Inc., has announced a 40% reduction of size in Leiman Base Mounted Electric Motor Driven Air Pump



Units. Capacities of the models are up to 29.9 in. vacuum Hg. and 20 lbs. pressure; displacement from one to 162 cu. ft. per min.; speeds from 600 to 1725 rpm.; horsepowers from ¼ to 10. For further details, please mention PEE No. 420 in your request.

Roller and Blanket Wash

Magnet Litho Supply Corp. announces a new cleaning solution called Scata-1-Step Roller and Blanket Wash. This cleaner contains chemicals which absorb moisture by emulsification. Thus water is picked up from rollers and blankets as they are

(*Continued on Page 120*)

DON'T GET YOUR SIGNALS CROSSED

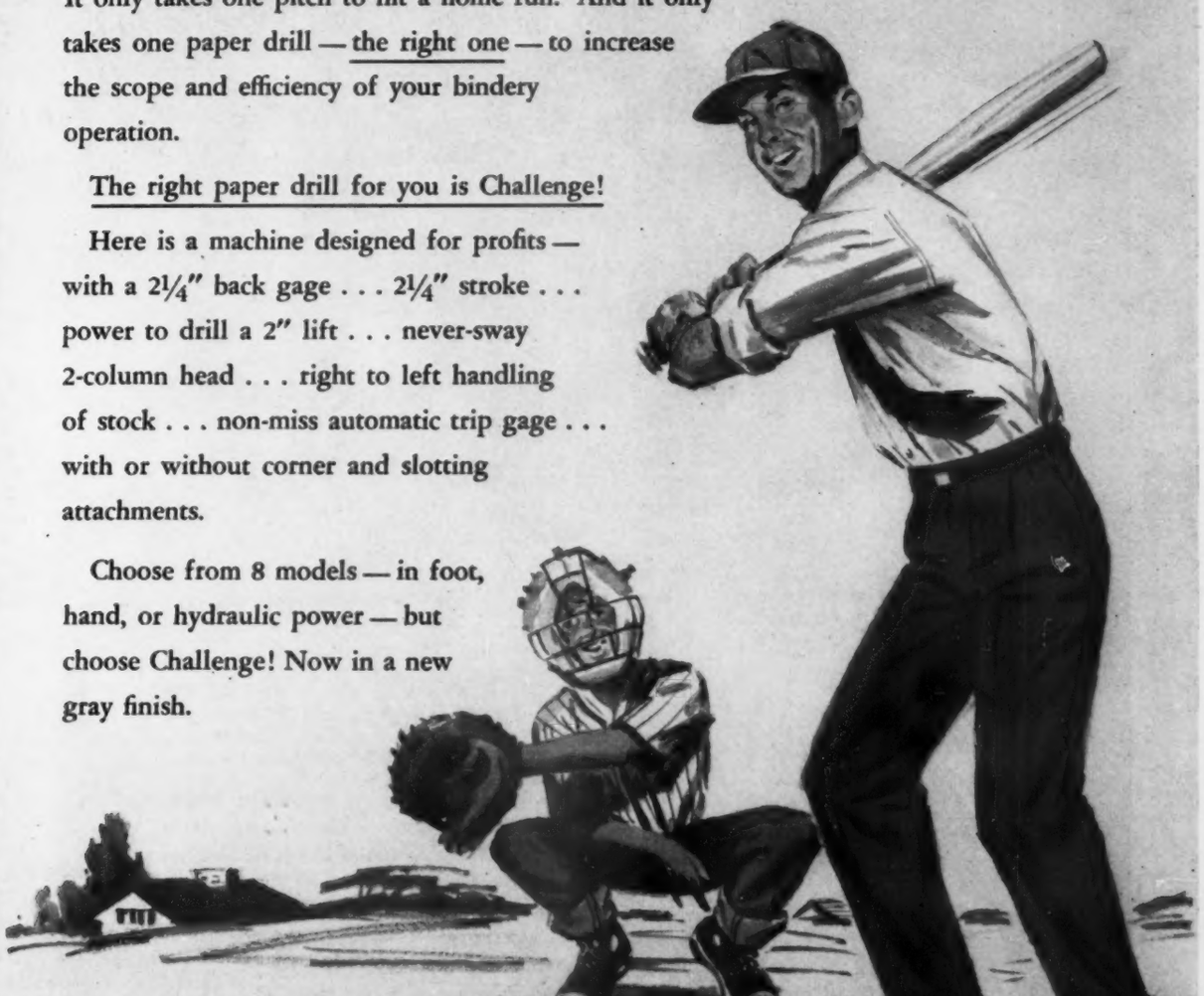
Always Specify CHALLENGE — *for the finest in paper drills!*

It only takes one pitch to hit a home run. And it only takes one paper drill — the right one — to increase the scope and efficiency of your bindery operation.

The right paper drill for you is Challenge!

Here is a machine designed for profits — with a 2¼" back gage . . . 2¼" stroke . . . power to drill a 2" lift . . . never-sway 2-column head . . . right to left handling of stock . . . non-miss automatic trip gage . . . with or without corner and slotting attachments.

Choose from 8 models — in foot, hand, or hydraulic power — but choose Challenge! Now in a new gray finish.



CHALLENGE STYLE E

790

THE CHALLENGE MACHINERY COMPANY

Office, Factories and Show Room:
GRAND HAVEN, MICHIGAN

DEALERS IN ALL PRINCIPAL CITIES

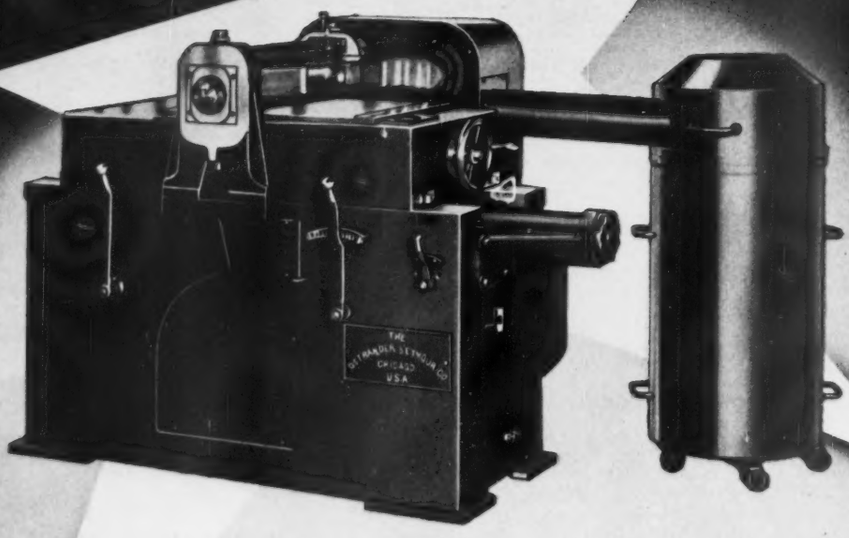
Challenge

TRADE-MARK ®

HYDRAULIC DRIVE

HEAVIER CONSTRUCTION

ADJUSTABLE CUTTER HEAD



WOULD YOU ACCEPT

Extra Profit?

SUPPLIERS TO ELECTROTYPERS AND STEREOTYPERS SINCE 1876

Never before has efficient equipment been so essential to profitable operation. Yet in many plants little attention has been given to the machinery of production, in relation to profit or loss.

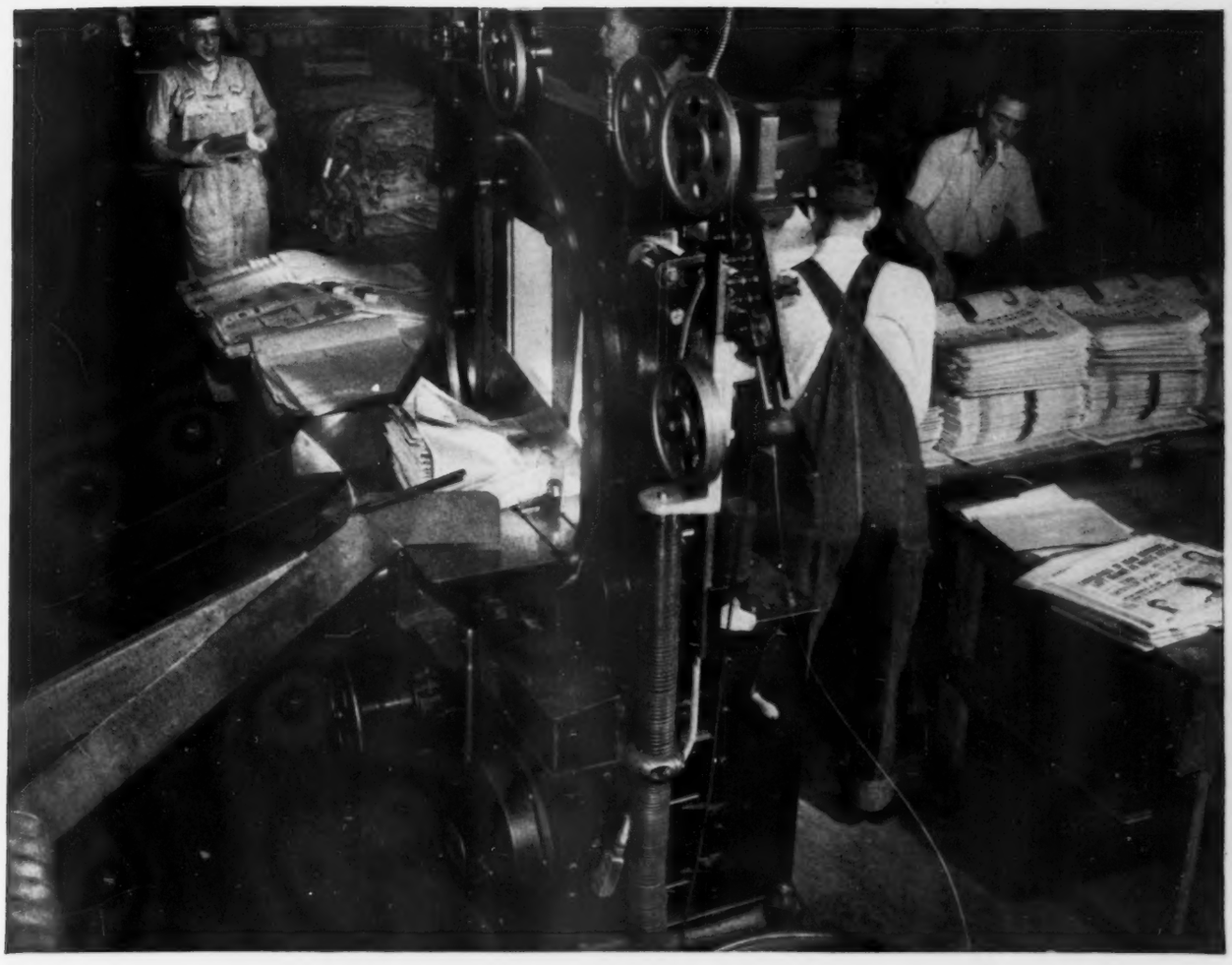
Modern, up-to-date equipment increases production and reduces costs. It changes loss to profit and small profit to a more generous one.

The Ostrander-Seymour Rotary Head Plate Shaving Machine (Junior Model) is designed for present day requirements. It is as efficient as the experience of 65 years in producing equipment for electrotypers and stereotypers can make it.

If your margin is little, if delivery requests seem unreasonable, if you need better quality plates faster, write or call. Recommendations do not obligate you.

THE OSTRANDER SEYMOUR CO.

1710 N. 25th AVE. • MELROSE PARK, ILL.



Cut mailing-room costs with the dependable

Signode Automatic Wire Tying Machine

first choice of more than 350 newspapers world-wide

Signode Automatic Wire Tying Machines reduce labor costs, permit more efficient use of manpower, meet delivery deadlines, assure tight, windproof, bundles with added protection against pilferage.

Many newspapers around the world have been using Signode Automatic Wire Tying Machines continuously for more than 30 years! In fact, over 30 newspapers with circulations in the area of 50,000 use only one machine.

Such confidence in the dependability of Signode Automatic Wire Tying Machines comes from day-to-day experience . . . from the knowledge that during the past 30 years Signode has eliminated the causes for tie-ups, and has built a heavier, sturdier machine that alone can provide years of dependable service.

Whether your circulation is 50,000 or 5,000,000, you'll want more information about Signode Automatic Wire Tying Machines. Write

SIGNODE

Steel Strapping Company

2667 N. Western Ave., Chicago 47, Ill.

this seal means security in shipping

SIGNODE

Offices coast to coast.
In Canada: Canadian Steel Strapping Co., Ltd.
Montreal • Toronto
Foreign Subsidiaries and Distributors World-Wide

EXCELLENCE: (Webster)

"Quality of being excellent; exalted merit."

IT FITS*...

the New York Herald Tribune

We heartily congratulate "The Trib" on being awarded permanent possession of the F. Wayland Ayer Cup for the third time.

As manufacturers of newspaper inks, serving the Herald Tribune among hundreds of other outstanding American newspapers, we recognize and accept the responsibility of maintaining excellence of product to match the achievement symbolized by the Ayer award.

*MORRILL means excellence in news inks

- **Blacks**
- **R.O.P. colors**
- **Metered Delivery**
- **Color Blending Systems**

A Division of Sun *Chemical Corporation*

Geo. H. Morrill Company

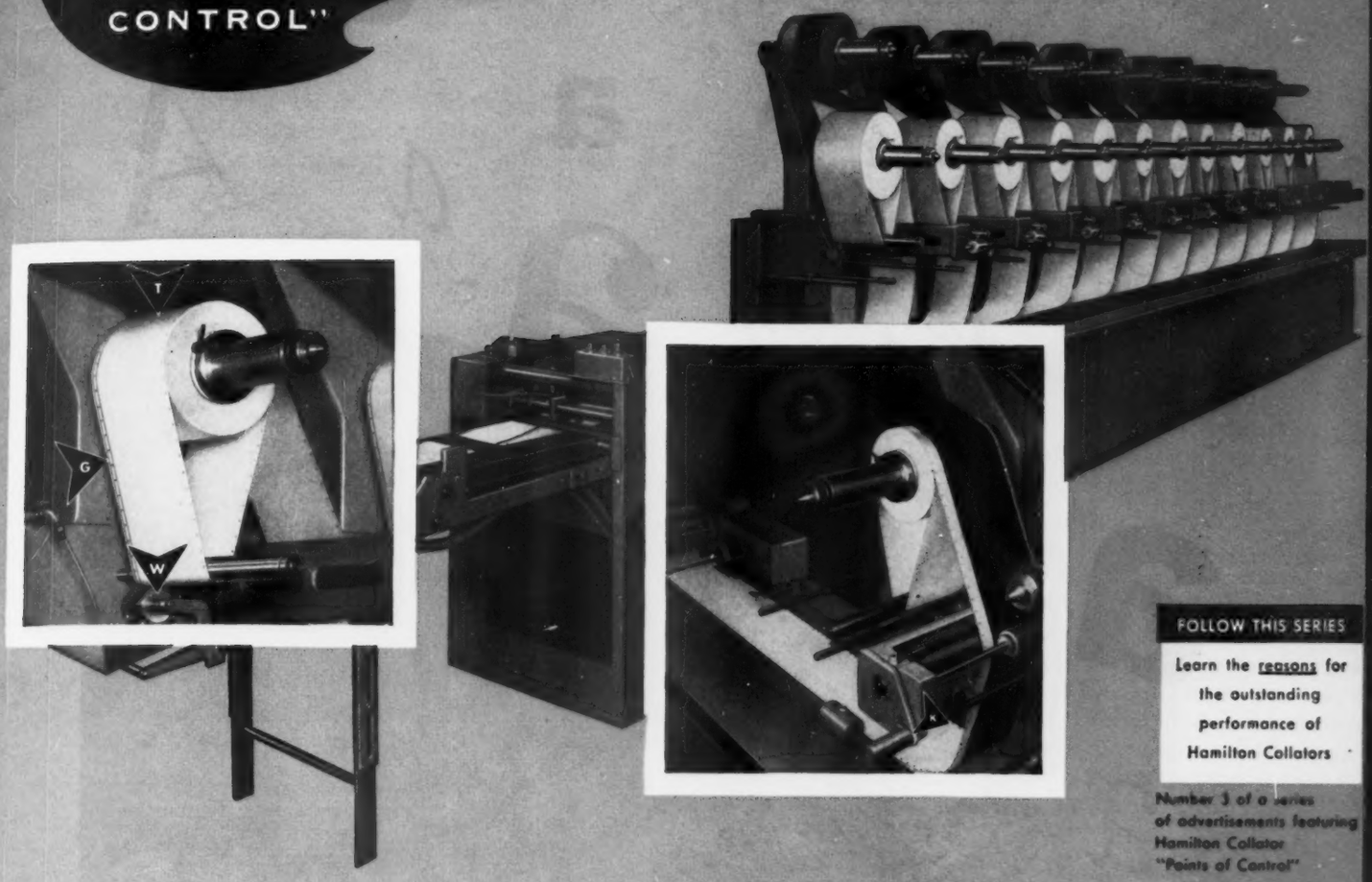
10th Street and 44th Avenue, Long Island City 1, N. Y.

DIVISIONS OF SUN CHEMICAL CORPORATION

HORN • **HUDSON** • **WILLEY** (paints, maintenance and construction materials, industrial coatings) • **WARWICK** (textile and industrial chemicals) • **WARWICK WAX** (refiners of specialty waxes) • **RUTHERFORD** (lithographic equipment) • **SUN SUPPLY** (lithographic supplies) • **GENERAL PRINTING INK** (Sigmund Ullman • Fuchs & Lang • Eagle • American • Kelly • Chemical Color & Supply Inks • **MORRILL** (news inks) **ELECTRO-TECHNICAL PRODUCTS** (coatings and plastics) **PIGMENTS DIVISION** (pigments for paints, plastics, printing inks of all kinds)

"A COLLATOR IS NO BETTER THAN ITS CONTROL"

Hamilton Collators' invariable accuracy and sustained top speed of the trade, 225 ft. per minute, spring from Hamilton's three primary control points: paper-carbon integrated web, automatic web feed control, and full length pin band.



FOLLOW THIS SERIES

Learn the reasons for the outstanding performance of Hamilton Collators

Number 3 of a series of advertisements featuring Hamilton Collator "Points of Control"

PAPER-CARBON INTEGRATED WEB

On Hamilton Collators the carbon is glued to the paper web *at its unwind point* so that carbon and paper are fed to the pin-band together as *one integral paper-carbon web.*

Glue is applied by wheel "W" to paper edge along double glue line "G", and meets the carbon web at point "T" to effect a cemented paper-carbon web for integrated feeding to the pin-band at point "K". Thus, with the carbon strip promptly reinforced by paper, feeding carbon to a Hamilton Collator is virtually without problems.

WHAT THE HAMILTON SYSTEM OF FEEDING INTEGRATED PAPER-CARBON WEBS FOR COLLATING MEANS TO YOU!

1 Webbing and set-up time are minimized by the simplicity of Hamilton's method of combining, registering, and feeding the integrated paper-carbon web. 2 The individual, sensitive, hand-adjusted brakes on the paper roll and carbon roll shafts are capable o being set when the rolls are mounted, so that a bar minimum of brake adjustment is required during th depletion of the rolls. 3 The entire carbon, pape and paper-carbon webs are "in the open" and con spicuously visible to the operator from rolls, throug the gluing process, to the point of entry onto the pin band. 4 The margin of paper beyond the edge o the carbon (or vice versa) can at all times be checke visually during operation; particularly important i double-stub work. 5 The glue lines are convenient visible to the operator for checking the operation o the gluing mechanism. 6 Spacing of glue lines ca be varied within relatively wide limits, instantaneousl and without removal of parts. 7 The unique Hamilto glue pot insures superior control of glue applicatio reliably permitting the application of heavy to e tremely light and fine lines of glue. 8 Hamilto gluing mechanisms are power-driven, not relying o frictional contact with paper.

Write for descriptive literature.

PRECISION BUSINESS FORM MACHINERY

The **HAMILTON** TOOL COMPANY
910 HANOVER ST., HAMILTON, OHIO

LEADERSHIP THROUGH PIONEER RESEARCH

Uncle Mat Says:

"THE GREATER THE VARIETY OF TYPE FACES USED, THE GREATER THE VALUE OF MATRIX CONTRAST SERVICE"

In display composition, with its larger assortment of type faces and sorts, the use of Matrix Contrast Colors will give you great savings in linecasting operation . . . a bonus that newspapers and job shops with a variety of type faces receive when adopting Matrix Contrast Service.

When the reference marks are treated in bright contrasting colors such as red, green, yellow, orange, or white, the clear-cut characters show any variation in colors immediately. The occurrence of wrong fonts is eliminated and pi mats are selected with assurance. With the squint taken out of his work the operator delivers a greater quantity and a better quality of composition.

Take it from your old Uncle Mat...

not one but five persons are pleased when Matrix Contrast Service is installed . . . the operator, the machinist, the employer, the reader, and the advertiser.

Copyright 1953, Matrix Contrast Corporation

MATRIX CONTRAST SERVICE *MATRIX CONTRAST CORPORATION*

154 West 14th Street, New York 11, N. Y.
326 W. Madison Street, Chicago 6, Ill.
1105 Trenton Street, Los Angeles 15, Calif.

European Agents: Funditor, Ltd., 3 Woodbridge Street, Clerkenwell Green, London, E.C.1.

Keeping Up With Progress—
The ANPA Mechanical Conference

THE LATEST technical developments for newspaper production are being displayed and discussed at the ANPA mechanical conference, June 6, 7, and 8, Edgewater Beach Hotel, Chicago.

A tentative program of the conference clearly shows the effort made to assemble timely and interesting speakers and subjects for this year of rapid technical advances.

Opening session is on industrial relations under the chairmanship of James L. Stott. Introductory remarks are being made by Joseph E. McMullen, followed by an address of welcome by Stuart List, publisher of the Chicago *American*. Other addresses are being made by D. Tennant Bryan, publisher, Richmond (Va.) *News Leader* and *Times-Dispatch*, and Warren Wheeler of the South Bend (Ind.) *Tribune*.

Speaking on Safety in Printing Plants in the safety session is Walter R. Smith, manager employee activities and safety, R. R. Donnelley & Sons Co., Chicago.

J. Harold Mintun is chairman of the composing room session. This session includes a film on the Selectro-Matic Quadder from Linotype Parts Co., a speaker from Ludlow Typograph Co. speaking on the Brightype Process, and a panel discussion of photocomposition in production.

A local advertising production clinic panel includes four representatives of Chicago's local advertisers and Deo A. Padgett, Cleveland (O.) *Plain Dealer*; W. R. Coddington, Chicago *News*, and John N. Barron, La Salle (Ill.) *News-Tribune*.

Joseph E. McMullen is chairman of the r.o.p. color session. This session includes a question and answer period on the fundamentals of r.o.p. color. There also is a report on the ANPA-AAAA Joint Committee on R.o.p. Color Standards.

Leven T. Deputy and Glen R. Hutchinson are co-chairmen of the stereotype session. A speaker from Parsons & Whittemore, Inc., is discussing the Mann Pressure-Casting Machine. Claude L. Baker, New Orleans (La.) *Times Picayune and States*, is talking on the Hi-Lo Chase. Tandem routers are being discussed by Glen R. Hutchinson. E. T. Giannoni, Chicago *Tribune*, is speaking on Tenanon, a new stereotype molding medium especially suited to r.o.p. color work. A panel of speakers is discussing plate wear.

The ANPA research program is being discussed by Roy W. Prince, technical director, ANPA Research Institute, New York, N. Y.

Pressroom session chairmen are Earl R. Weiskittel and Henry Garland. Subjects and speakers include: Newsprint by Stephen W. Clark of the New York (N.Y.) *News*; New Press Equipment at the Windsor (Ont., Can.) *Star* by John Crabtree, vice chairman, R. W. Crabtree & Sons, Ltd., Toronto, Can.; Hoe Tension Lockup by Charles A. Harless, R. Hoe & Co.; and K.I.D. Blanket Lockup by Harry Davidson, San Francisco (Calif.) *Call-Bulletin*.

W. E. Gibbons is chairman of the mailroom session. In this session, George C. Feldt, Milwaukee (Wis.) *Journal* is speaking on Further Developments on the Cutler-Hammer Stacker. There is a movie on the Jampol Pusher installation at the Milwaukee *Journal* mailroom. One speaker is talking on an In-Line Feeder while Harold E. Burris, Harrisburg (Pa.) *Patriot-News*, is discussing the Chesire-Collmar Mailing Machine. There is a speaker from the Toronto (Ont., Can.) *Star* to talk on the Star Wrapper, and a film from the Wire-tyer Corp.

John W. Park and W. W. Southam are co-chairmen of the engraving session. This session includes a discussion of Tri-X 35mm. Film by Robert Dumke, Milwaukee (Wis.) *Journal*; an outline of the subject of engravings from facsimile; a session on user experience of Dow-ANPA High Speed Engraving; a speaker from Acme Telectronix Division, NEA Services, Inc., Cleveland, talking on the Acme One-Bite Etching Process; and one speaker from Wire Coating & Mfg. Co., Cleveland, talking on the WDM Self-Banking Etching Process.

John W. Park is chairman of the advertising session which includes George H. Fuller of the Cleveland (O.) *Press*, speaking on advertising material and Eldon Rohrson, Tatham Laird Agency, Chicago, speaking on advertising.

Chairmen of the smaller cities session are Charles A. Fredrickson, Allan M. Woods and George F. Marshall. Moderator is Roy Coates of the Grand Rapids (Mich.) *Press*. There is, in addition, a panel of 10 executives chosen from the field to discuss problems and solutions.

Meet the American Newspaper Publishers Association

Mechanical Committee & Research Executives

The Mechanical Committee of the American Newspaper Publishers Assoc. is comprised of executives from various plant departments and geographical locations in the newspaper printing industry. These men are appointed because their backgrounds in the industry qualify them to solve newspaper production problems. Production, mechanical and management interests are watched and weighed by this group. *Printing Equipment Engineer* annually salutes the important work and valuable contributions of this committee by presenting portraits of its members to the industry.

JOSEPH E. McMULLEN
Committee Chairman and
Prod. Mgr., *Milwaukee Journal*

LEVEN T. DEPUTY
Mech. Supt., Dallas
(Tex.) *Morning News*

WILLIAM DWIGHT
Pres., Holyoke (Mass.)
Transcript-Telegram

CHAS. FREDRICKSON
Mech. Supt., Westchester County Publishers, Inc., N. Y.

HENRY H. GARLAND
Prod. Mgr., Pittsburgh
(Pa.) *Post-Gazette*

W. E. GIBBONS
Prod. Mgr., Portland
(Ore.) *Journal*

G. R. HUTCHINSON
Prod. Mgr., Los Angeles
Times-Mirror

GEO. F. MARSHALL
Prod. Mgr., Portland
(Me.) *Press Herald*

J. HAROLD MINTUN
Prod. Mgr., Pittsburgh
(Pa.) *Press*

RICHARD E. LEWIS
Mgr., ANPA Mechanical Dept., New York, N. Y.

JOHN W. PARK
Prod. Mgr., Chicago *Tribune*

HARRY SLOAN
Prod. Mgr., New York (N. Y.) *Mirror*

W. W. SOUTHAM
Exec. Asst., Southam Co. Ltd., Montreal, Can.

JAMES L. STOTT
Bus. Mgr., Richmond (Va.) *Times-Dispatch* and *News-Leader*

E. R. WEISKITTEL
Pressroom Supt., Youngstown (O.) *Vindicator*

ALLAN M. WOODS
Prod. Mgr., *Newsday*, Garden City, N. Y.

FRANKLIN D. SCHURZ
Pres., ANPA Research Institute and Secy.-Treas. South Bend (Ind.) *Tribune*

ROY PRINCE
Technical Research Director, ANPA Research Institute, Easton, Pa.

Additions Since '54

CHARLES FREDRICKSON has been with the Westchester County Publishers, Inc., for 43 years. He presently is mechanical superintendent for the firm. Fredrickson was one of seven brothers who served an apprenticeship at Walter Scott & Co., Plainfield, N. H. He also worked as an outside erector of presses and stereotype equipment before breaking into newspaper work as stereo.-press foreman on the Mount Vernon (N. Y.) *Daily Argus*. On the lighter side, talk to Fredrickson about golf or fishing.

GLEN R. HUTCHINSON, production manager for the Los Angeles *Times-Mirror*, has been associated with his present company for 35 years. Hutchinson at one time was foreman for the Newspaper Division of the Rochester (Minn.) *Post and Record*, and foreman for the Hollywood (Calif.) *Citizen News*. He's interested in all types of spectator sports.

GEORGE F. MARSHALL is production manager of the Portland (Me.) *Press Herald, Evening Express* and *Sunday Telegram*. He started out to be a lawyer, passing the Maine bar exams in 1936. While studying law, he worked in commercial and newspaper printing plants. Finally an opportunity at Gannett Publishing Co. to devote full time to newspaper manufacturing operation won him over. He became production manager of the Gannett papers Jan. 1, 1942. As Marshall will freely admit, he plays *at* golf.

J. HAROLD MINTUN, production manager of the Pittsburgh *Press*, has been with his present firm for six years. Previous connections in the industry include five years at the Pittsburgh *Post-Gazette* and 22 years at the Decatur (Ill.) *Herald-Review*. Mintun helped develop the Teletypesetter and the composing operation is still his favorite.

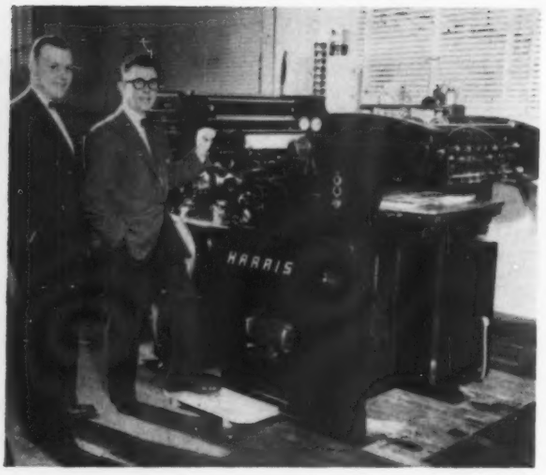
ALLAN M. WOODS is production manager for the Garden City (N. Y.) *Newsday*. He's been with the firm 14 years except for a year with the Ogden newspapers in West Virginia. Woods also has worked for the New York (N. Y.) *Daily News*, White Plains (N. Y.) *Reporter*, and Wheeling (W. Va.) *News-Register*. He pioneered in developing composing room production controls. Among his hobbies are photography, horsemanship, gunning, farming and helping to raise three daughters.

HARRY SLOAN, production manager for the New York *Mirror*, has been with that company for more than 25 years. While his job takes him into all phases of production, Sloan still likes the composing room end best. He started with the *American Weekly* in New York. Sloan also served the industry as a member of the ANPA committee for rotogravure printing. Evenings you'll probably find Sloan hammering or sanding something; he's a boating and do-it-yourself fan.

ROY W. PRINCE is the technical research director of the ANPA Research Institute, Inc. He has been with ANPA since 1948 and with the Research Institute since it was formed. Previous to those connections, Prince had been with Bell Telephone Laboratories as a member of their technical staff, Massachusetts Institute of Technology on the physics department instructing staff, and Bartol Research Foundation as a research assistant. He holds a B.S. degree in physics and math from William & Mary College and a S.B. degree in electrical engineering from M.I.T. It's no surprise with such a heady fellow that Prince's hobby is electronics.

LET OTHERS READ IT

The growing demand for copies of *Printing Equipment Engineer* makes it impossible to fill requests in every case. As a regular recipient, won't you please let other executives, as well as any promising future executive employees in your plant, read this copy when you are finished with it?



First for San Jose—The first Harris 17 in. by 22 in. offset press in San Jose, Calif., has been installed at Tucker Printing and Lithograph, reports Harris-Seybold Co. Tucker Printing is a commercial printing firm. L. L. Tucker (right), owner of the company, and H. E. Stoffers, Harris-Seybold sales representative, are shown at the installation.

Mechanical Dept. Manager Lewis Reports to ANPA

ANPA Mechanical Dept. Manager Richard E. Lewis presented his annual report to the ANPA convention, New York, at the Waldorf-Astoria, during the week of April 25. His report is optimistic and encouraging with respect to industry technology and member participation. In his report, Lewis states the services of the Mechanical Department are now being used more by members than in the past. The increased complexity of producing bigger papers with greater circulations has necessitated careful examination of existing procedures plus close scrutiny of new equipment and new methods. Mechanical personnel have found the Mechanical Department helpful in analyzing and evaluating these things.

Mechanical Conference

All of the 105 equipment display booths have been sold. This demonstrates the interest of manufacturers and suppliers in displaying the latest equipment to production personnel.

There will be three full days of sessions, plus one night session which will be a Smaller Cities Session devoted to their overall production problems. A panel of executives from all operating departments will lead discussions.

Other features of the program include Local Advertising Clinic, Photocomposition in Production, Fundamentals of R.o.p. Color Printing, ANPA-AAAA Standards for R.o.p. Color Printing Plate Wear, New Casting Equipment, New Developments in High Speed Engraving, New Press Equipment, New Developments in Mailroom Automation Equipment.

Mechanical Bulletins

During 1954, 27 Mechanical Bulletins were published.

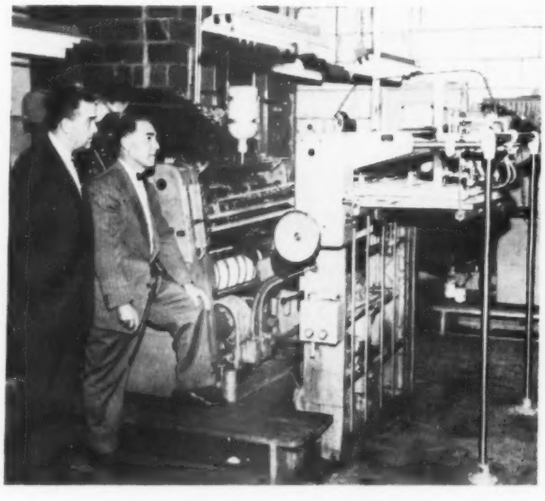
Newsprint Waste

The Quarterly Newsprint Waste Report brought gratifying comment from participating papers. Manager Lewis urges those papers not reporting figures to join in this campaign to reduce newsprint waste.

R.o.p. Color Printing

Lewis stated that the ANPA-AAAA Joint Committee on R.o.p. Color Printing has selected standard inks consisting of three process colors, nine mixing and blending colors and a mixing and blending white. These inks will be known as ANPA-AAAA Standard R.o.p. Colors. All ink manufacturers have been consulted and all agree to offer these colors in the near future. A report is now being prepared which will contain all information relating to these standards, as well as printed samples of each ink. From the basic 13 colors more than 600 separate and distinct shades and colors can be mixed either by the newspaper or by the manufacturer. Advertisers will be able to specify a color by name and proportion of the 13 standards. In this manner, identical colors can be prepared at any time by any newspaper. Also in the final stages of preparation are the Joint Committee reports to cover Recommended Standards for the Preparation of Copy, Art, Photography, Engraving and Duplicating Materials; and Recommendations for Plant Procedures for Handling R.o.p. Color Printing.

The manager's concluding statement was: "These standards have been prepared by the Joint Committee after more than two years of careful study requiring detailed attention. It is felt that these reports will greatly assist the advancement of color advertising in newspapers."



Second in One Year—Hemisphere Litho. Corp., New York, N. Y., recently acquired its second Miehle press. Elliot H. Robinson (right), president of Hemisphere Litho., and Bert Stein, New York representative of the Miehle company, here look at the second installation, a Miehle No. 29 Offset Press.

Schurz Reports On Newspaper Research

AT THE ANPA convention, Waldorf-Astoria Hotel, New York, N. Y., during the week of April 25, President Franklin D. Schurz, ANPA Research Institute, delivered the annual report on behalf of the Institute's Board of Directors. His report was fascinating and indicated much progress respecting newspaper printing technology. He informed his listeners that the ANPA Research Institute is cooperating with manufacturers on numerous research projects. One, the ANPA-Dow high speed etching process, is already in operation in several newspapers. Three others, which are described in this report, are now being tested in newspaper plants and will be marketed soon. Several others will be ready for testing shortly.

"During the next few years," he said, "newspapers will have the opportunity to experiment with several new processes and many new machines, all designed to make labor more efficient and to reduce costs. If a number of newspapers test them as soon as they appear on the market, improvements will be made which will benefit all newspapers. If most newspapers hold back and insist that a new invention be thoroughly proven before they use it, progress will be slow.

"The 30 leading industries in the United States are spending about 2% of their gross sales on research. While most newspapers are not equipped to do independent research, they can aid newspaper research by experimenting with the new equipment which has been and will be produced through the cooperative efforts of ANPA Research Institute and manufacturers."

Teletypesetter Allocator

One of the most interesting parts of Schurz's address was related to the automatic allocation of tape from each of

several Teletypesetter perforators to any idle high speed linecasting machine in a plant.

"The Teletypesetter Corporation," he reported, "has invented such an automatic allocating machine and is now testing it in a newspaper. This system provides rapid means of transmitting perforated tape from a larger number of teletype perforator operators to a small number of high speed linecasting machines, in order to keep all the linecasting machines operating continuously at their maximum capacity.

"Through this allocating system, the transmitter, when turned on, will automatically begin to transmit to the first available linecasting machine, and will continue until a disconnect signal originating at the transmitting point automatically stops transmission. If a linecasting machine is not available when the operator attempts to establish a connection, transmission will wait until a linecasting machine becomes idle, at which time a connection is automatically established and transmission starts.

"This system will function more efficiently when all linecasting machines are arranged for automatic magazine shift, with the agate font in one magazine and the text matter in the other. Selection of linecasting machine magazines may then be automatically made from signals in the tape. If the linecasting machines are not equipped with tape controlled magazine shift, a signal can be perforated in the tape to stop automatically the linecasting machine when the agate font magazine is to be used. The attendant can then change to the proper mold and magazine.

Operation Above 12 Lines Per Min.

"As the speed of linecasting machines is increased above 12 lines a minute," he said, "the Teletypesetter allocating system becomes even more valuable in order to eliminate idle linecasting time and to operate linecasters most efficiently."

Cutler-Hammer Stacker

Schurz reported: "The basic design of the Cutler-Hammer stacker has been tested and proven, and a production model for field testing has been completed. The company is now in a position to make the stacker more flexible and useful. In the present model the number of papers required in each stack is determined at the beginning of the run. The stacker then delivers this number per stack until the end of the run.

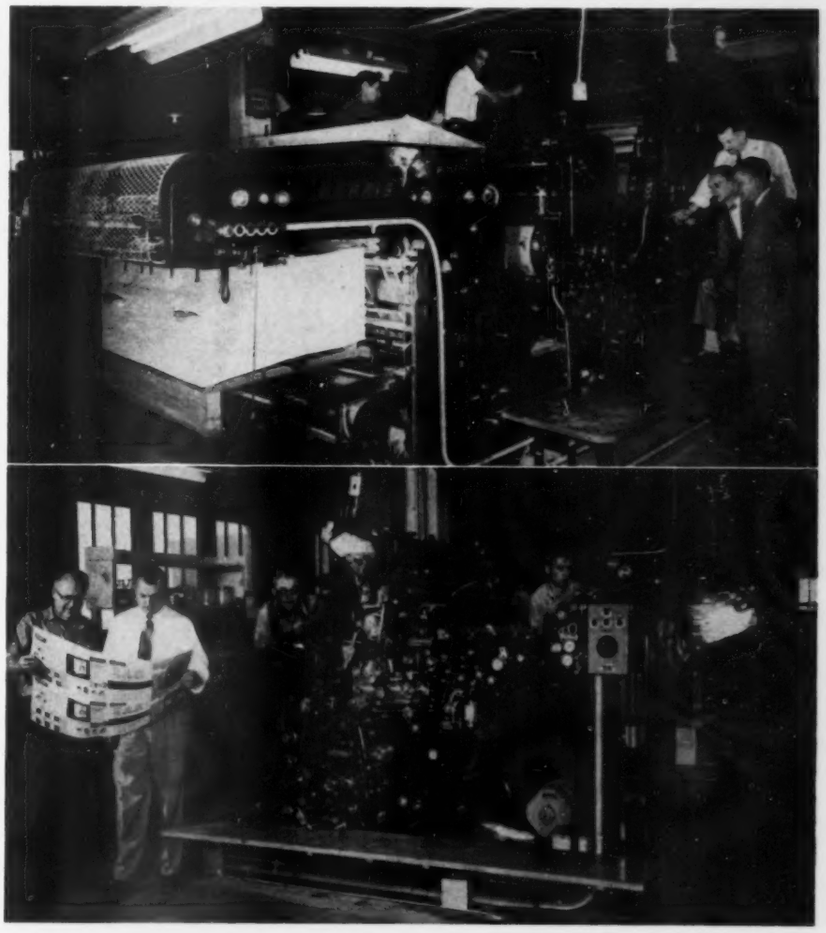
"Cutler-Hammer now plans by means of a punched card system to change the pre-set count at the end of each count, or at the end of a predetermined number of counts during a run. Thus, by this programming system, the newspapers will be delivered to the mail room automatically in the various sized stacks required.

"The maximum and minimum size of stacks is governed by the stacker design and the speed of the press. In order to determine the area of application of such a programming system, the ANPA Research Institute is cooperating in polling a number of newspapers to determine their present practices. This information, when received, will serve as the basis for designing a programming system.

Tandem Plate Router

"Following a survey by the ANPA Research Institute on the need for tandem routers, the Sta-Hi Corp. has completed a model and is testing it in a newspaper plant.

"Plate motion of the router is restricted to rotation only, under hydraulic control. The head carrying the router bit traverses the plate, also under hydraulic control. The left and right hand wheels normally employed on a curved plate router have been replaced by left and right lever controls which operate hydraulic valves. One reason that an operator can quickly accommodate himself to these controls is that the left hand lever control performs the same function as the normal left hand wheel control performs on a standard curved plate router. By the same token, the right hand lever performs the same functions now performed by the right hand wheel control. Thus, the operator



In the upper picture is shown the Harris 35 in. by 45 in. offset two color press recently installed in plant of McGill-Warner Company printing plant, St. Paul, Minn. Shown in the picture from left to right are: Production Supt. John Kufner, Vice Pres. and Gen. Mgr. Robert Krueger, Pres. Robert E. Morrissey. Shown in the upper section of the press are Phillip Folmer and Alex Wachman, pressmen. This is one of three presses installed in the McGill-Warner plant. Looking at the press sheet from the new Harris 22 in. by 43 in. offset press in the plant of McGill-Warner Co., St. Paul, Minn., are Foreman Andrew Meyers and Production Supt. John Kufner. Peering from the press are Pressman Leo Kelbe and Feeder LeRoy Reinardy.

Three New Harris Offset Presses Included in McGill-Warner $250 Thousand Expansion Program—Currently undergoing an improvement and revitalization program in the McGill-Warner Co., St. Paul, Minn., one of the Northwest's oldest and largest printing houses. Company executives' goal is to produce more printing more efficiently, and to keep abreast of technical advances and processes in the Graphic Arts field.

The expansion program includes the addition of both new equipment and new personnel. In the offset department, McGill-Warner has added three new Harris offset presses—a 35 in. by 45 in. two color, a 22 in. by 34 in. two color and a 21 in. by 28 in. single color. These are in addition to several existing 22 in. by 34 in. single color presses, and a 38 in. by 52 in. single color. The bindery has just been equipped with a new P-50 Seybold cutter. Several new pieces of equipment have been installed in the letterpress department.

Responsible for the revitalization program is Robert J. Krueger, recently appointed vice president and general manager. A production control department has been set up under Daniel Nedoroski, a former assistant to the production superintendent at Brown & Bigelow. McGill-Warner's new sales manager is George Knox. Three new salesmen have been added, bringing the total to eight.

does not have to learn to perform a different function with his right or left hand than he now performs.

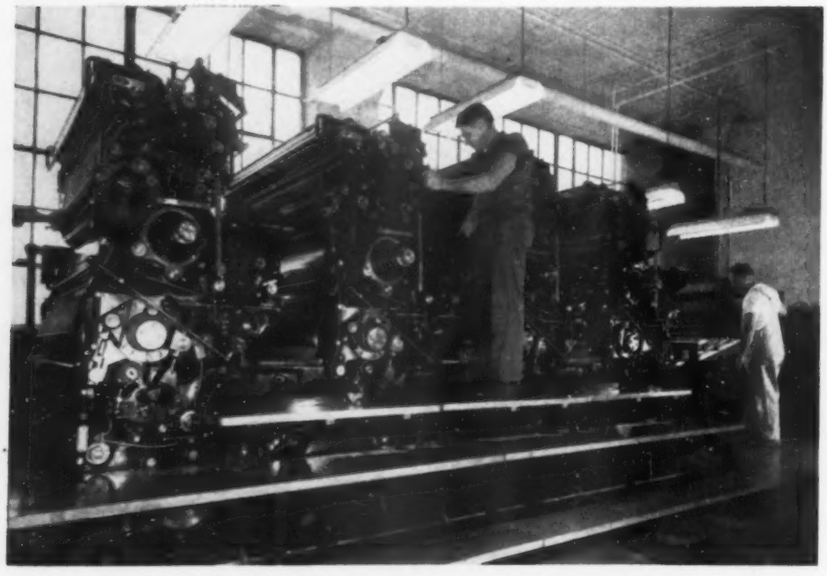
"The router tool is brought down to the plate by means of an air cylinder control which is operated by either foot. The plates are locked on the plate cylinder with a lever operated by a quick lockup system. If proper registration is obtained in the mat, the routing can be done as close to the printing surface as the operator wishes to route, without fear of damaging the other plate.

"Tests indicate that by using the tandem router, two plates can be routed more easily than a single plate with equipment in current use.

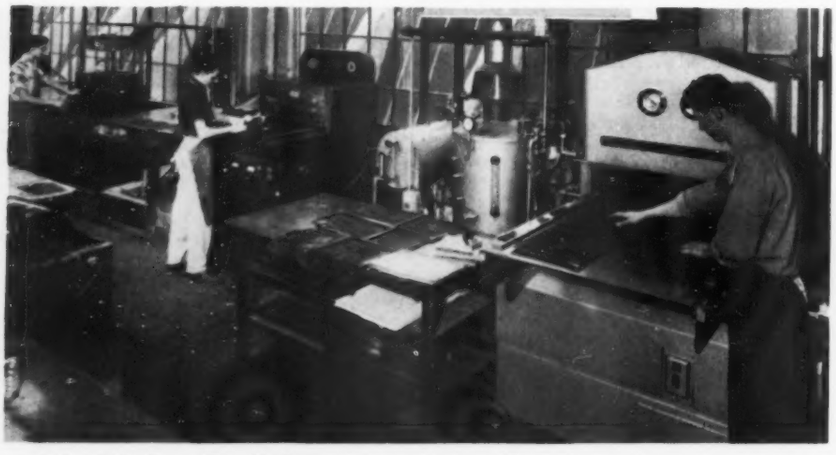
Laboratory Floor Space Expanded

"Most of the new inventions, as illustrated by the three just mentioned, tend toward a greater mechanization of the mechanical departments. With the installation of more complex machines, more machinists will be needed. Publishers should examine their union contracts to see whether the apprenticeship clauses permit the training of a sufficient number of machinist apprentices to meet future needs.

"An addition to the ANPA Research Institute Laboratory of 2000 sq. ft. is now completed. It has been erected to house the new direct image offset press and other press equipment which were located in the temperature and humidity control room. A portion of the addition will be utilized for storage space and, consequently, the storage space now rented in Easton will be relinquished. With the completion of this addition, research on several projects can be pushed forward more vigorously."



Color for the Ladies—This Harris 42 in. by 58 in. four color offset press is the latest addition to the pressroom of the McCall Corporation, Dayton, O. The press will be used primarily to print McCall's Pattern Counter Book and pattern envelopes. The press is housed in a specially constructed room where proper temperature and humidity conditions are maintained.



Lake Erie Press Installation—A view of the rubber plate molding department at Precision Electrotype Co., San Francisco, is shown above. At right is a recently installed Lake Erie Acraplate which is designed for molding rubber plates up to 42 in. by 32 in. To the left are two Baldwin Southwark (Heinrich) molding presses. Also installed recently at Precision was a unit for making curved electrotypes by the curved casting method.

Publishers Luke Warm Toward Research Work

PATIENCE and continual experimentation is the answer to new techniques, processes and machines which don't work perfectly at first, said Franklin D. Schurz in a talk given at the Engraving Session of the Great Lakes Newspaper Mechanical Conference in Detroit. Schurz is editor and publisher of the South Bend (Ind.) *Tribune* and also research chairman of the American Newspaper Publishers Assoc.

He said a relatively small amount is spent on research in the printing field while other industries are devoting 2% of their gross sales to this activity. He noted that some manufacturing companies have large research budgets and added ". . . the ANPA is investing $250 thousand a year in research but unfortunately too few newspapers are really working on any research projects. The research work a newspaper does benefits not only itself but in time will help other newspapers."

Midwest Shows More Initiative

Continuing, he remarked: ". . . publishers and heads of mechanical departments on midwest newspapers show a greater interest in change than they do in other sections of the country. Even here the interest is not as great as it should be."

Schurz said that recently he wrote a number of publishers regarding the possible development of a machine which would improve the efficiency of one of the mechanical departments. He had inquired whether they would be interested in buying the machine when developed. One publisher replied ". . . he had spent all the money he was going to spend on equipment for several years." Schurz commented: "I wonder if his mechanical superintendent said they needed to add a man or two to their working force, he would say they are adding no more men for several years. Actually, if he doesn't add equipment he will probably add men."

Research Not Appreciated

Schurz continued: "(The replies) showed me that many publishers do not appreciate the value of research or how to use it.

"I doubt whether you can install any new piece of equipment and immediately save money. In fact, until the men learn how to use it, it may cost more. However, if you study the most efficient method of using the machine you will probably find the efficiency of the men will increase and you will find that the machine will soon pay for itself."

Results with Dow-ANPA Process

As an example of this, he cited the Dow-ANPA high speed etching process.

(*Continued on Page 119*)

Seventh Birthday for Seybold Air Jets—To mark the installation of more than 34,000 air jets in Seybold air-film cutter tables during the past seven years, the first user of Seybold air jets visited Harris-Seybold's Dayton (O.) plant recently. He is W. F. Weaver (right) superintendent of the finishing room, Aetna Paper Co., Dayton, O., looking at air jet No. 34,000-plus, held by R. I. Haywood, chief engineer for the Seybold Division. Seybold's air jets do most of the hard work when heavy lifts of paper are shifted on the cutter table by releasing streams of compressed air. Friction is said to be reduced by as much as 85%.

BOOKS

Methods of Reasoning

MANY readers of *Printing Equipment Engineer* will find that *Methods of Reasoning* is an easily read booklet containing the entire approach to the scientific method. In condensing, popularizing and clarifying the method, the author has made the technique of problem solving and decision making immediately available to the reader.

The Dark Ages were broken by such thinkers as Bacon and Descartes, but not until now has the gist of all of this 300 and more years of method and investigation been reduced to such a highly usable form.

The work of the logicians, scientists, philosophers and theologians has been crystallized and fitted together to create a pattern for answering today's problem solving needs.

Starting from the basic thought of what is reasoning, the author proceeds in a clear manner through easily assimilated steps covering the concept of the sensed difficulty, techniques of establishing the problem and how to state the approach and the method of arriving at sound solutions.

Among its interesting chapter headings are: *Who Thinks?, What Thinking Is, What Meaning Means, What is So, Cause and Effect, About Rules, Problems, There is More than One Answer, Can You Prove It?, The Other Person, Let's Do Something,* and *Be Wise.*

An important part of the booklet is a most valuable five-step review of the basic material which could always be used as a reminder and guide to clear thinking.

The subject matter in the chapter on *Thought Patterns* will become immediately recognizable in its explanation of the manner in which we usually get things done with our mind.

How Many Answers is a logical approach to practicality and probability.

Under *Creative Imagination* is restated other portions of the booklet which tend to show the ease in which anyone can establish for himself this desirable and wished for trait.

Not elsewhere published is the approach to the manner of dealing with other persons. The author accepts the fact that logic is most desirable for the solution of our problems.

The author, P. D. Scott, has had 25 years' experience in training engineers and technical personnel. He has been a member of the Board of Governors of the Cleveland Engineering Society, has held numerous chairmanships within the organization, and was instrumental in setting the pattern for the present 15-course Technical Education Program.

Methods of Reasoning is available from the Publications Office, Cleveland Engineering Society, 2136 East 19th St., Cleveland 15, O., for $1 a copy.

Index of LTF Publications

Lithographic Technical Foundation has issued a general index of all its publications. Designed to serve as a reference source, it contains an alphabetical and cross-index listing of the many subjects covered in the LTF Skilled Craft Texts, Shop Manuals, Special Subject Texts and Research and Technical Publications. The cross-index of subjects is of particular value in locating the LTF source of information. Page and bulletin numbers are included in the listings. An explanation of how to use the index and a list of the Foundation's bulletins are also included among the 128 pages. It may be ordered directly from Lithographic Technical Foundation, 131 E. 39th St., New York 16, N. Y. Price: members, $1.38 per copy; non-members, $4.18 per copy.

Survey of Lithography

Just about every aspect of the lithographic field is touched upon in the 112 page text *Survey of Lithography* which has been prepared by the Lithographic Technical Foundation as Bulletin No. 407. This edition is a revision of the original text published in 1945. It is intended to be of value to both the experienced and novice person engaged in the offset printing process. The contents are useful, also, to those seeking a broad understanding of the Graphic Arts industry.

The book's 16 chapters comprise a comparison of the major printing processes, a brief history of the lithographic industry, detailed descriptions of the main divisions of the industry and product end use. Some of the most interesting parts deal with the principles of photomechanical platemaking, photomechanical equipment and materials, camera and stripping operations, press, paper and inks, color separation and correction, and copy preparation. Advantages and limitations of the process are also touched upon.

Survey of Lithography—Book consists of 112 pages; well illustrated; measures 5½ in. by 8½ in.; paper cover. May be ordered from Lithographic Technical Foundation, 131 E. 39th St., New York 16, N. Y. Price: members, $1.38 per copy; non-members, $4.18 per copy.

Techniques That Produce Teamwork

Techniques That Produce Teamwork is a study in group dynamics for administrators, (including those in industry). This book was written by two men with experience in applying techniques that do produce teamwork—Warren H. Schmidt, Adult Education Association of the U. S., and Paul C. Buchanan, Psychologist, U. S. Naval Ordnance Test Station, Pasadena, Calif. The authors point out that if you want your staff to accept more responsibility you must have goals that make sense to them. They show that responsibility and authority must operate within clear boundaries; that sharing responsibility differs from delegating responsibility; that sharing responsibility does not mean giving up responsibility; that sharing responsibility requires honesty and skills; that sharing is a two-way process; that you must trust people. Through explanation this book shows how to develop team spirit even in large groups; how to successfully apply the system of overlapping staff teams; how this system develops the skills of subordinates and promotes loyalty to the organization. *Techniques That Produce Teamwork* sells for $2.50. Copies are available from Arthur C. Croft Publications, New London, Conn.

Self-Advertising Contest Now Open

The fourth annual Printing Industry of America, Inc., Printers' and Lithographers' Self-Advertising Exhibition and Awards is now underway. Entrants will compete for three $1000 cash awards and nine Benjamin Franklin statuettes, offered by the PIA and Miller Printing Machinery Co., sponsors of this activity.

Awards are to be presented at the PIA convention at Chalfonte-Haddon Hall, Atlantic City, October 15-20. Prizes will again be given in three divisions, depending on the size of the company, and for both sustained advertising campaigns and individual promotions.

The contest closes September 23 and will include entries from September 23, 1954 to the closing date. All printing firms whether or not they are PIA members are eligible to enter.

Instruction booklet and entry forms may be obtained from the local PIA offices or the national headquarters at 719 Fifteenth St., N.W., Washington 5, D.C.; from Miller Printing Machinery Co., 1117 Reedsdale St., Pittsburgh 33, Pa., or at 730 Bay St., Toronto 2, Ont.

FAST POWDERLESS ETCHANT FOR ENGRAVING ZINC PLATES

In response to a number of inquiries from the field, and in the form of a progress report, the following statement has been made by Imperial Type Metal Co.:

"We have been working on a fast etchant for engraving zinc plates. At this date, we do not have a definite formula we can offer to the trade, but from our results so far, we are quite optimistic the process will be perfected.

"We are at present etching zinc at the same speed as magnesium. However, our results have only been experimental and on small areas.

"Other firms are working on this same problem. While we are operating entirely independently, we are cooperating with the proper parties within our industry so we can minimize duplication of effort and hasten the progress of a suitable fast powderless method of etching zinc.

"As a matter of general information, whatever success we have in accomplishing this objective will be given to the photoengraving industry freely without royalties or any other obligation.

"Lewis S. Somers,
Executive Vice Pres.
Imperial Type Metal Co."

Foremen Learn Of Management

EIGHT printing firms of Wichita, Kans., recently combined efforts to hold a two week Foreman's Management Training Program.

The program is jointly sponsored by the Printing Industry of America and the Lithographic Technical Foundation. It is normally a five day course. The Wichita companies organized into two groups (see the accompanying picture for Wichita group), each meeting on alternate nights. William F. Gutwein, labor relations consultant from Louisville, Ky., conducted the meetings.

Certificates for completing the course were given to 38 people at a Saturday morning meeting, April 2, 1955. At this session, Gutwein also gave his presentation on HOBSO (How Our Business System Operates).

Participating firms were McCormick-Armstrong, Inc.; Duke, Inc.; Grit Printing Co.; Printing, Inc.; Edwards Typographical Service; Donlevy Litho; Acme Litho; and Griffin Printing Co.

Men attending this Foreman's Management Training Program included Vern Manning, Bill Jackson, Don Shapley, Gene Smith, Ernie Howell, Al Schleicher, Charlie Dunn, Paul Nuckolls, Ted Hawkins, Frank Dunham, Dwight Krehbiel, Jerry Young, Pete Armstrong, Chili Capps, Bill Webb, Bud McCormick, Lee Bujarski, Ray Shropshire, Carl Wolf, Don Lisenby, Clarence Lambdin, Dean Giesecke, Jack Stockwell, Earl Duke, jr., Claude Stanley, Clerin Davidson, Dale Rice, Bowen Brady, Alden Dinsmore, David Hammel, William Teer, Archie Baunhofer, Waldo Leisy, Gene Donlevy, Richard Robinette, Glenn Bish, Sammy Cuda, and Sam Bryant.

Wichita Foremen—This is one of two groups of foremen from Wichita, Kans., printing plants which attended a Foremen's Management Training Program early this year. The program is jointly sponsored by Printing Industry of America and the Lithographic Technical Foundation.

Newspaper Press Roller Care

(Abstracted from a talk by Pressroom Supt. Robert Adams, Canton (O.) *Repository*, before the Great Lakes Newspaper Mechanical Conference, Detroit, January 1955)

When new rollers are received from the manufacturer, they should be stored in a horizontal position with the original heavy paper covering left on. They should also be kept from heat, sunlight and dust, and, if possible, placed in a closed room where they will be available at all times. This will also protect them from rough handling, possible damage by stereotype plates and other materials being moved to and from the presses.

It should be the custom to keep a record about all rollers when they are put in the press. A number should be stamped on the roller shaft and a card file kept for each roller. Any regrinding information can also be filed on the card.

When preparing rollers for the press, a thorough examination should be made of bearings and roller sockets, and defective parts replaced. Care should be taken that the rollers are not bumped when being installed.

Use the Right Solvent

When preparing a roller for its first press, use the solvent or cleaning fluid recommended by the roller manufacturer. When rubber rollers are used with a good grade of black news ink, they do not require a washup. However, when presses are being used for printing color, preparing a unit or more than one means considerable washing of rollers. The washing solvents used for one roller might not work on another. Stick with the manufacturer's recommended solvent for the roller.

Roller Grinding Tips

A need for regrinding of the roller is indicated when you have to set heavy to cover the taper or unevenness of the roller to drum or plate. Regrind also when bolster marks, surface cuts and damage from chips off the stereotype plates show up on the roller.

Grinding of rollers in your newspaper plant should be placed in the hands of a skilled workman. A man qualified to operate a lathe might prove to be able to do the job successfully. All possible information should be secured about the particular roller you are grinding.

Safety Contest

The Lord Baltimore Press and the United States Printing and Lithograph Co.'s St. Charles (Ill.) plant took top places in the National Safety Council's Printing and Publishing Safety Contest for 1954. Thirty-eight plants working a total of 78,015,000 man hours finished the year with a total of 552 disabling injuries. This represented an increase of 10% in the injury rate as compared with 1953. The Lord Baltimore Press, Baltimore, Md., led a field of 20 plants in its size group with a perfect record. In second place was the Kingsport Press, Kingsport, Tenn., with a rate of 0.94. Westinghouse Electric Corp., Trafford, Pa., was third with 1.13.

GOSS Plate Perfector

MORE MAJOR FEATURES FOR CONTINUOUS, HIGH-SPEED PLATE PRODUCTION

Automatic or Push Button Controls

Automatic Matrix Setter

Centralized Lubrication

Advanced, Unit Design

Adaptable to the needs of every size plant

Precision Plates • • • exact

25 REASONS . . .

For Better Stereotyping

1 Automatic, With Push Button Controls

2 Automatic Matrix Setter
Allows multiple plates to be cast in rapid succession without resetting mat, easing work and speeding production. Assures uniformity of successive plates.

3 Master Control Panel
Signal lights and push buttons conveniently placed waist-high on machine.

4 Centralized Lubrication
Farval Multi-Val System provides grease for 90 percent of points from two central stations.

5 May Be Used With Any Metal Pump
The Plate Perfector may be installed with the new Goss metal pump or it may be used with existing equipment. Pump is mounted on furnace, with controls on Plate Perfector.

6 New Goss Pneumatic Pump
Electric controls placed away from heat. Automatic timer operates pump after casting box is locked. Safety switch prevents pouring unless mat is in position. Automatic or push button operation. Adaptable to all types of casting equipment. Mounts on furnace.

7 Heavy Duty Vacuum Casting Box

8 Individual Water Circuits
Complete with filters, in both the casting box and the plunger.

9 Dial Thermostatic Controls
Timer allows operator to vary solidification time, in accordance with pre-set water temperatures, to control plate shrinkage.

10 Smooth, Easy Plunger Operation
Positive lockup in both casting and horizontal positions. Pneumatic action gives fingertip control, eliminating jarring and effort in closing and opening. Lockup mechanism enclosed. No adjustment needed between plunger and ring.

11 Automatic or Manual Lockup

12 Reinforced Shaving Arch
Rigid one-piece arch, water-cooled, assures accuracy in shaving plates.

13 Positive Plate Lockup
Power-operated springs automatically lift and lock plate rigidly under constant pressure against arch during entire shaving cycle for uniform machining. Tail cutting, shaving and beveling are performed in one cycle.

14 Simple Adjustments
Convenient, accessible provision for adjustment of shaving knife and cutters.

15 Built-in Direct Drive Motor
Coupled to drive shaft. No belt slippage, wear or adjustment. Jog button provided

16 Timken Pre-loaded Roller Bearings
— support main drive shaft and hold all rotating mechanisms in a fixed running position.

17 Tail Slide-off Plate
Just flip tails off onto conveyor belt or into container, eliminating steps and time lost in carrying tails to furnace.

18 Open Top Cooling Unit
Delivers plates with dry top. No cover plate or other moving parts. Individually adjustable spray nozzles direct water in any desired volume to any area. Enclosed piping and drains. Operator may adjust length of cooling time. Rubber wipers wipe bottom of plates.

19 Air Blow-off
Removes excess moisture.

20 Tension Miller
Tension Miller may be included as an integral part of the Plate Perfector. Operator slides plates from cooling unit to the milling arch of the Tension Miller. Tension Miller provides for pre-register of tension lockup plates.

21 Rugged Construction
Every part designed for maximum strength without needless weight.

22 Unit Design
Automatic features may be added at any time to the basic machine. All mechanisms conveniently accessible for easy operation and maintenance.

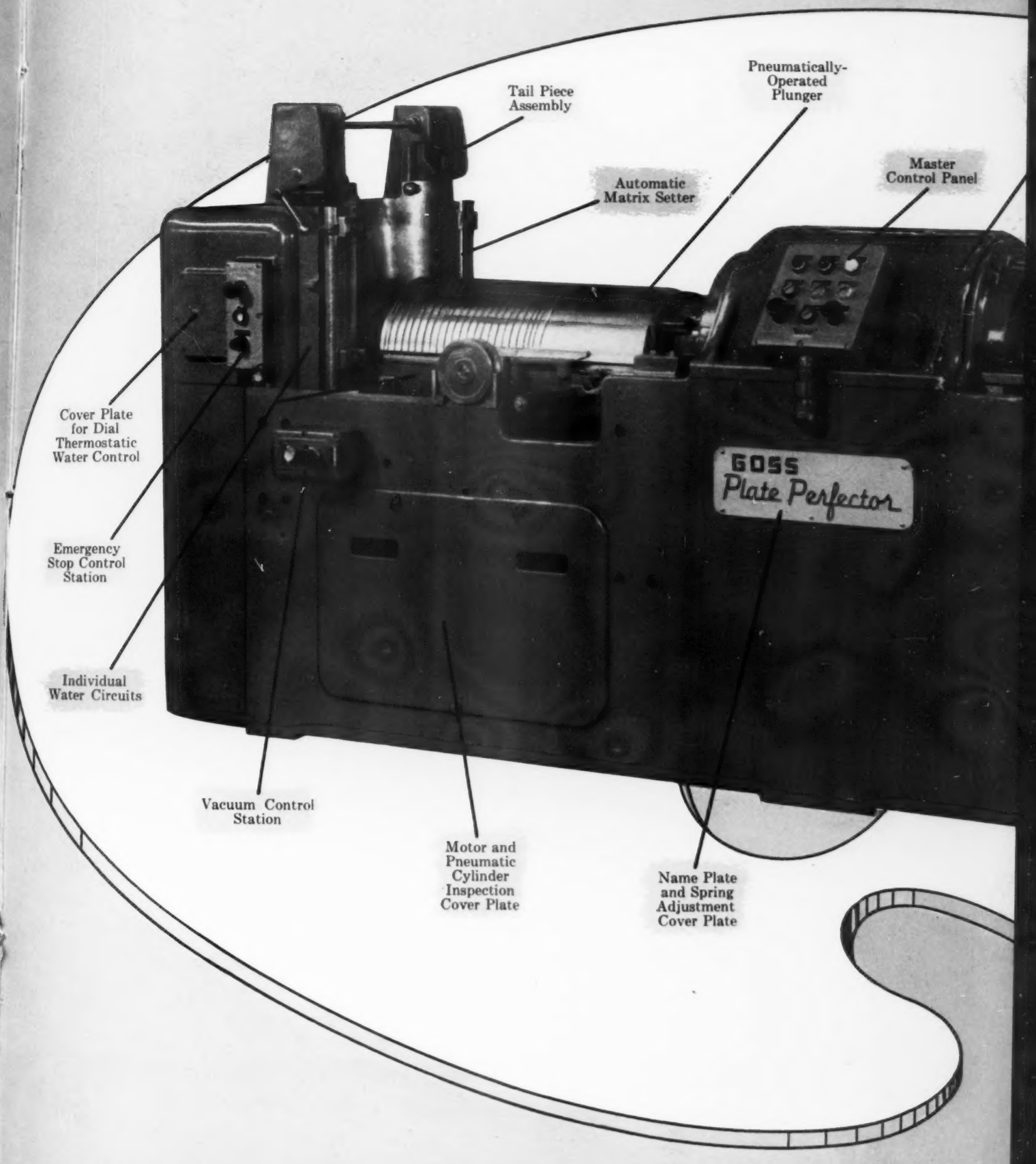
23 Complete With Vacuum Equipment
Vacuum pump unit may be located away from metal furnace and Plate Perfector.

24 Convenient Clean-out Chute

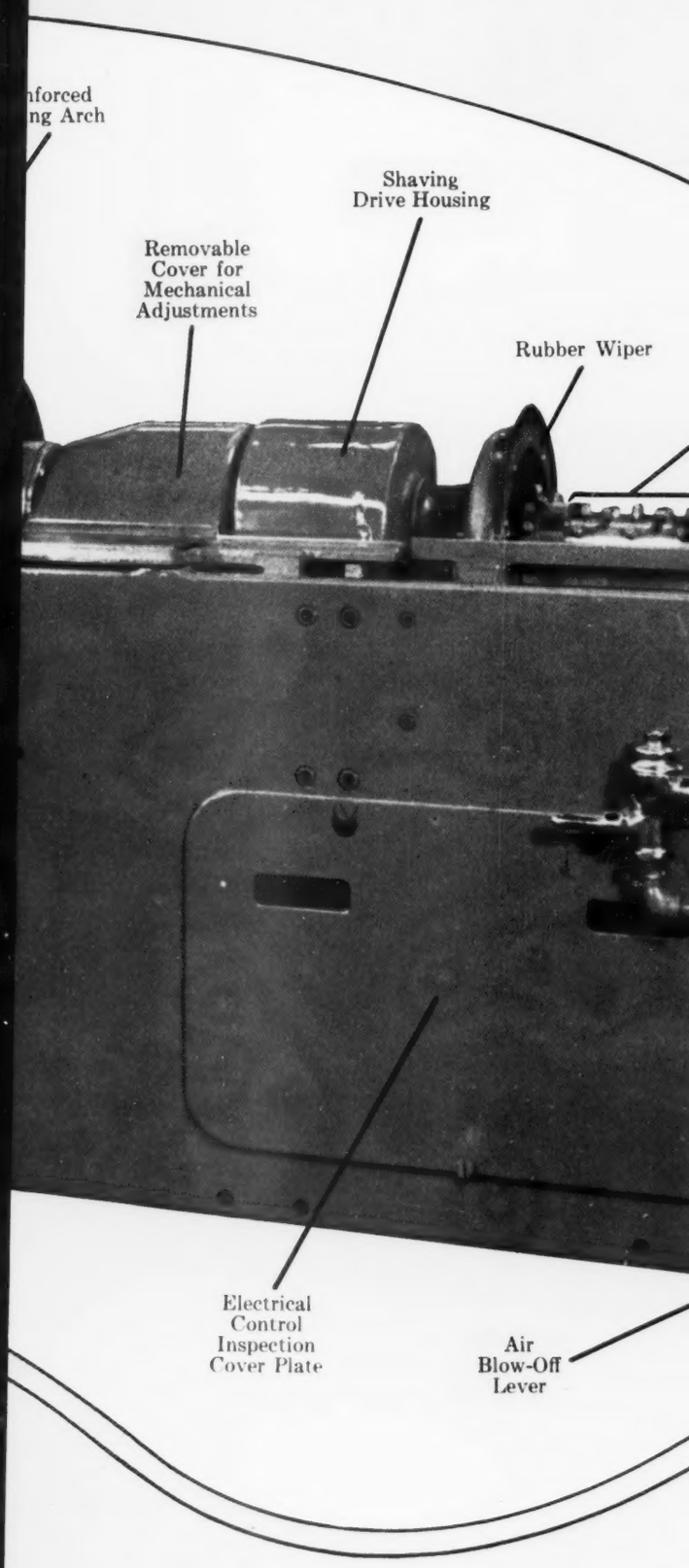
25 Enclosed Electrical Cabinet
Placed within unit, yet easily accessible; protected from chips and dirt.

Rate of production • • • 3 plates every 2 minutes.

register • • • finest black a



d ROP color


nforced
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Shaving
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Rubber Wiper
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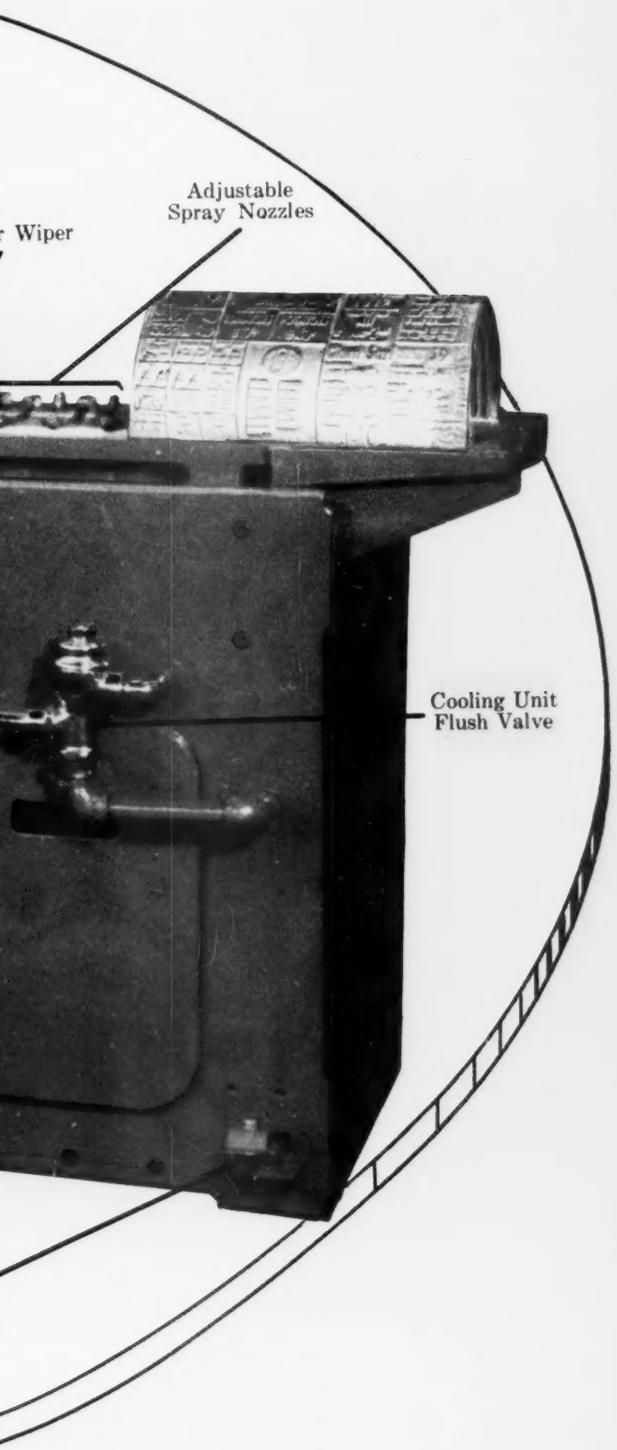
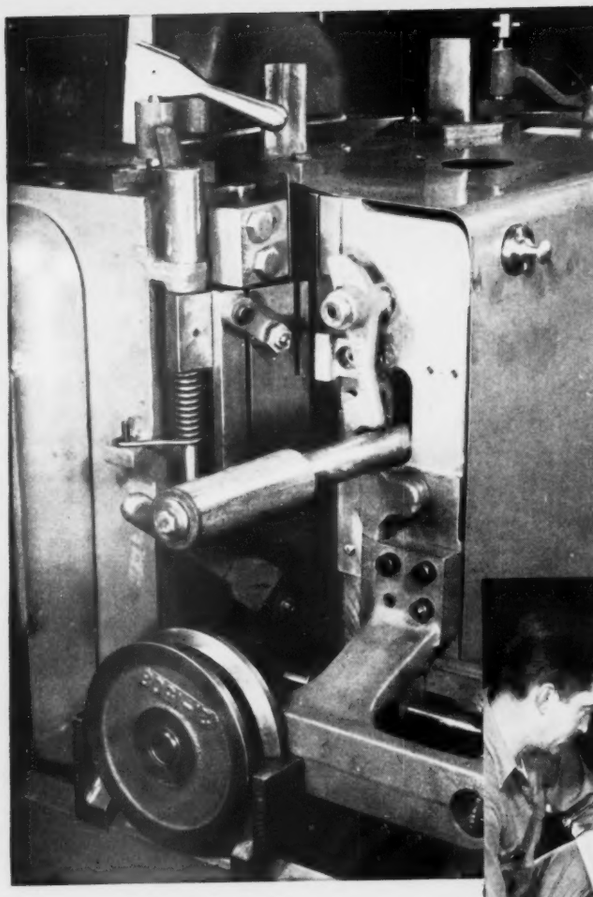




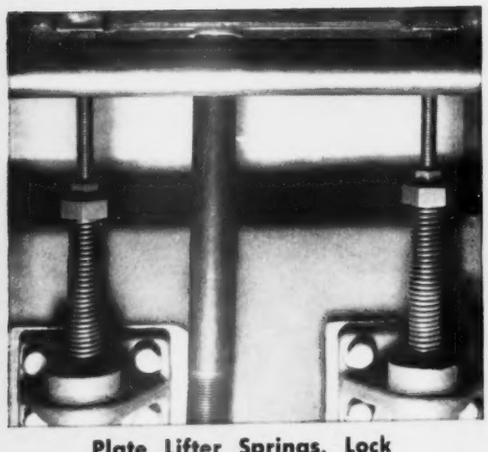
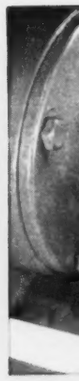
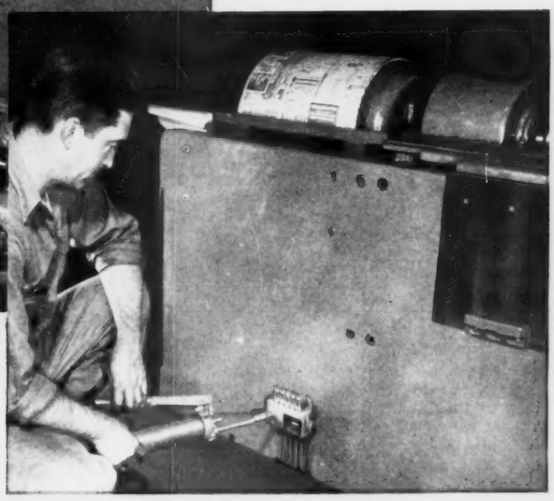


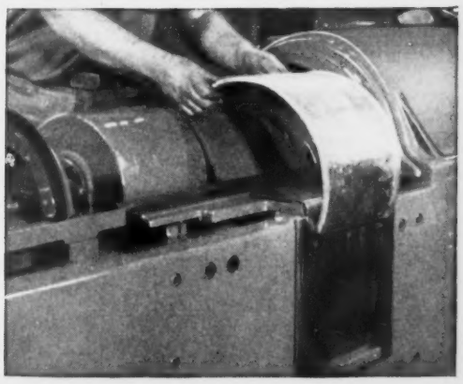
Plate Lifter Springs. Lock plate rigidly during the entire shaving cycle.



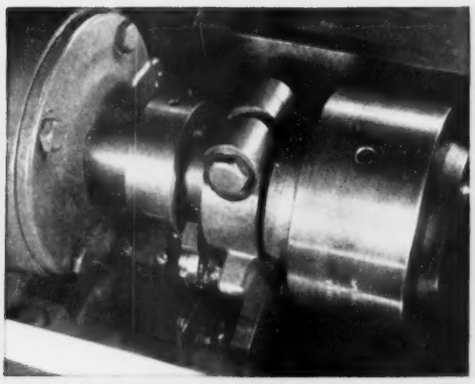
Automatic Matrix Setter. Allows multiple plates to be cast in rapid succession without resetting mat.



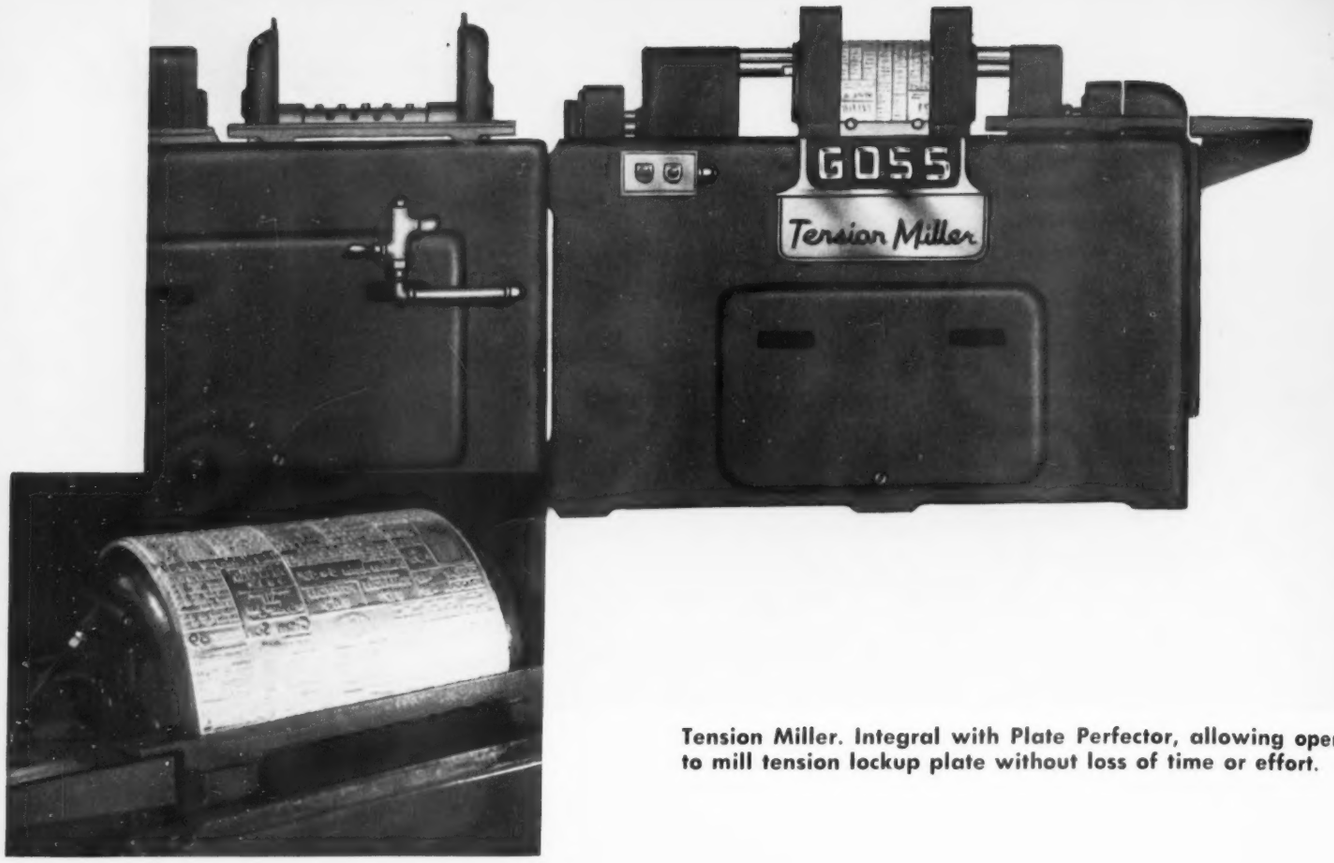
Centralized Lubrication



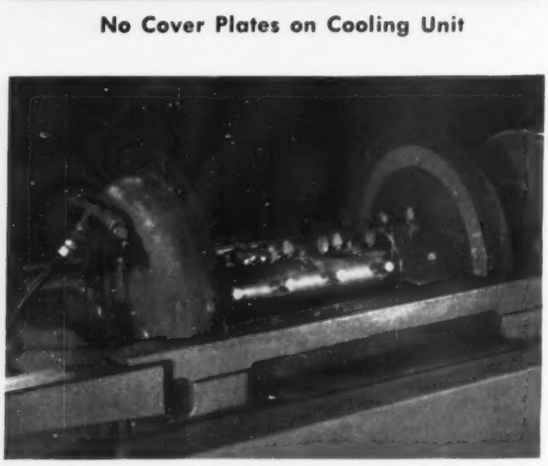
Tail Slide-Off Plate



Accessible and Simple Mechanical Adjustments



Tension Miller. Integral with Plate Perfector, allowing operator to mill tension lockup plate without loss of time or effort.



No Cover Plates on Cooling Unit

Individual, Adjustable Spray Nozzles

All Cutting Tools Enclosed for Safety

COMPARE • • •

See why the GOSS Plate Perfector gives you *MORE*

Look to GOSS for continued leadership in latest design for improvements in stereotyping and in newspaper, magazine and rotogravure printing.

☆ ☆ ☆

SPECIFICATIONS

Length (Plate Perfector)	11′ 11″
(Tension Plate Perfector)	17′ 7″
Width	2′ 7½″
Height (Plate Perfector)	3′ 10″
Weight (Plate Perfector)	7600 pounds
Power	3 H.P.
Air	40 pounds per square inch, minimum
Water	20 gallons per minute at 15 pounds pressure
Vacuum pump assembly	500 pounds

THE GOSS PRINTING PRESS COMPANY

5601 West 31st Street, Chicago 50, Illinois

Circ. 136

Printed in U.S.A.

Xerography Usable in Fluid-Type Duplicating

XEROGRAPHY can be used to prepare spirit and fluid-type duplicating masters, says Dr. John Dessauer, vice president-research, Haloid Company. That is possible through a new xerographic method.

Up until now, Haloid had developed xerography for the preparation of offset paper masters, translucent intermediates, and single copies. The new xerographic method, according to Dessauer, makes it possible to transfer and reproduce anything written, typed, printed, or drawn —in original, enlarged, or reduced size —onto spirit or other fluid-type duplicating masters.

The method works like this: Image of the original is transferred onto a XeroX plate through use of a XeroX Camera and XeroX Processor. That image, in turn, is transferred to the carbon sheet of the master set. Final step is to put the two sections of the master set, consisting of the carbon and the blank sheet which will become the completed master, through the XeroX Flo-Set unit. In the latter unit, pressure and chemical-vapor action combine automatically to transfer

The young lady is holding the two sections of a master set, consisting of the carbon and the sheet which becomes the completed master. In Haloid Company's new xerographic method for making spirit and fluid-type duplicating masters, transfer of the printing image from carbon to paper takes place in a XeroX Flo-Set unit.

and fuse the printing image from the carbon to the paper. From original to master requires about 3 min., says Dessauer.

Masters made by the spirit and other fluid-type processes usually are not suitable for long runs. However, through use of this xerographic method a new master can be made from an old master while the image on the latter is still good for reproduction. Thus, need for copies beyond the usual limits of a single master can be met through use of the master-to-master procedure.

Descriptive literature may be had by mentioning PEE No. 267L in your request.

Offset Blankets—

Data on construction, compounding, care and selection

By B. P. NILLES*

**President, Rapid Roller Co., Chicago. Address delivered before Chicago Club of Printing House Craftsmen, April 1955*

CHECKING back on the first application of the offset blanket, it was found that in the year of 1875 a specially treated cardboard was used as an offset medium for transferring ink to paper. Early in the first decade of the twentieth century it was discovered, at that time, that rubber made an excellent blanket material. Without this discovery the 300 line halftone printing as we have it today would not have been possible.

The conditions of the offset blanket are similar to the conditions under which the lithographic offset rollers operate. Blankets, as well as rollers, must be resistant to highspeed presses, inks, papers, solvents, etc. In order to more fully appreciate the lithographic blanket I have divided the subjects into various categories as follows:

Construction of Blankets

The blankets are made in 2, 3 and 4 plies of fabric, laminated by means of thin layers of rubber. This laminated structure is covered by an approx. 0.020 in. thick top layer of a synthetic rubber compound so that the total thickness of the blanket is in the vicinity of 0.055 in., 0.065 in., or 0.075 in. respectively, depending upon the number of fabric plies used. The fabric is made from long staple domestic and Egyptian cotton and woven to strict specifications. It is carefully treated for minimum stretch. The top rubber surface, the most important part of the blanket, is made by coating the fabric with a large number of thin coats of a synthetic rubber compound cement. The blanket is then festooned to permit the last traces of solvent to evaporate before vulcanization.

Compounding of Blanket

Before the last war, nearly all blankets were made from natural rubber. At that time even the linseed oil inks would emboss or swell them, making their life and usefulness limited. Moreover, the surface was more sensitive to oxidation. The consequences were glazy or tacky blankets, something the lithographer had to take in his stride. Today most of the synthetic rubbers that are employed are not at all affected by linseed oil and if compounded properly will stand up well in modern fast drying and gloss inks. However, even now the use of driers in inks should be reduced to the necessary minimum. Fast drying inks that leave a layer of dried varnish on the blankets are the main cause of blanket glazing. Resistance to inks is only one aspect of a good blanket, although a very important one. At least as vital are its lifting qualities, the true reproduction of colors and solids and halftones. These qualities result from the overall physical properties of the top layer of rubber and the total structure of the blankets.

The correlation of these properties with the printing performance, however, is difficult to make. Blanket manufacturers have worked out specifications as to hardness, permanent and compression set of the top layer compound, and other individual characteristics. Unfortunately, this correlation is not 100% foolproof. We cannot predict, for instance, how long a blanket will last on the press, even barring accidents that might occur. Blankets themselves have a stretch below 2% and a tensile strength of over 400 lbs. per lineal inch.

Care of Blanket

First, it must be cut perfectly square, the bars must be put on parallel to each other and perpendicular to the blanket and tightened uniformly across the blanket. This is necessary to avoid bowing in, which in many cases can be traced back to uneven tightening of the bolts and to inexact cutting of the blanket.

It is virtually impossible to tear a blanket if it is mounted correctly. On the average, the tensile strength of a blanket is 400 lbs. per lineal inch, which means it would take a pull of about 15 T. to tear a blanket 55 in. by 77 in. Care also has to be taken that the blanket is not creased or pinched during handling. Any damage inflicted to the surface is irreparable. The blankets should be packed on the press just enough to provide a kiss impression or a printing pressure not exceeding 0.004 in. Too much pressure will produce embossing and engraving of the blanket.

Blankets should be stored in dark, cool places. They should be placed rubber to rubber. Although synthetic rubber is not nearly as much affected by heat and light as natural rubber, and although protective materials called anti-oxidants are incorporated in every rubber compound, blankets exposed to light and/or heat will eventually become glazy and slick and lose their ink receptivity.

The most important feature of maintenance of a blanket is the washup operation. As a daily wash, preferably petroleum distillates boiling between 190 deg. and 265 deg. should be used. Slow

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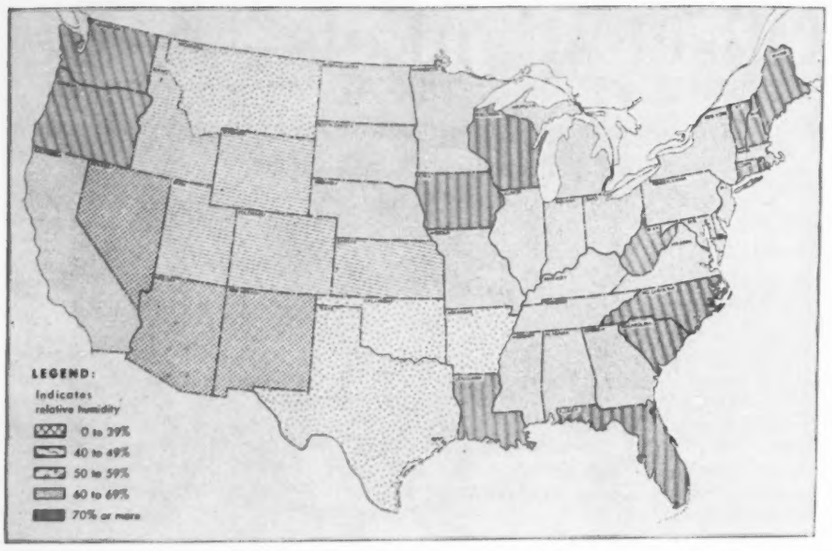

Humidity Forecast—(Prepared for Offset-Lith Printers). Shading on the above map forecasts the problems lithographers in each state can expect this summer from humidity. The map was prepared by Minnesota Mining and Manufacturing Co. from U. S. Weather Bureau records for June, July and August 1954, indicating the average percentage of relative humidity experienced by metropolitan areas in these states last year, and which can be expected again this summer. Humidity—a constant enemy—often ruins printing jobs by causing offset plates to oxidize on the press, unless the printer uses plates which are unaffected by heat or humidity.

Short-run Three-color Printing Discussed at RIT Symposium

RESEARCHERS and printers interested in short-run three-color reproduction gathered at the Rochester (N. Y.) Institute of Technology on April 19 and 20 for a symposium covering all phases of commercial work. Men from Eastman Kodak Co. and RIT Graphic Arts Research Dept. met with some of the pioneer commercial users.

Registered at the symposium were 84 men representing 40 firms.

Virgil P. Barta, head of Research department, opened the symposium with a welcome.

Dr. C. J. Staud, director of Kodak Research Laboratories, reviewed the history and development of the three-color system.

In Kodak's development of its three-color system an important decision was to eliminate the conventional black printer. Offset was chosen as the process because the equipment is simple, and printing speed is adequate for short runs.

Commercial inks were found poorly suited to the process, and ink manufacturers were invited to develop special three-color inks.

Evolution of the present Kodak system depended on several inventions: Contact screen, simple masking methods, register control devices, automatic equipment for flash exposure, and means of holding films. Further development can be expected in automatic equipment aimed at cost reduction and improvement of quality.

Dr. Staud said Kodak will continue its efforts to combine standardization and technology for the benefit of low-cost short-run color reproduction. "We have no illusions about quality," he stated, "it is not the best, but it is the best that can be achieved at a price, and is adequate for its intended purpose."

Dr. Henry C. Staehle, Kodak Research Labs, said that commercial color printing in editions of 1000 or less is prohibitively expensive by conventional methods. Kodak's goal has been to reduce book illustration costs by a fraction of 10. Staehle detailed requirements of a printing system which might accomplish this goal, based on 35 mm. color slides in such common use, and including techniques and equipment resulting in low cost.

David Johnson, Princeton (N. J.) Polychrome Press, discussed the quality of transparencies and evaluation before separation. He emphasized that the best color originals are slightly underexposed. Open shadows, with good tone separation, and good highlight detail are prerequisites to pleasing reproductions. Printers need to work with customers and educate them to the possibilities and limitations of three-color printing.

Franklin R. Clapper, Kodak Research Laboratories, said: "While many variations and applications are being utilized, there are two fundamental principles that must be retained if we are to consider them all under one heading. First, the system must require no handwork at any stage, and second, specially selected inks must be employed to give satisfactory reproduction of hue and produce balance neutrals. With the use of these inks and a single unsharp contrast-reducing mask, color brightness is controlled and the reproduced tones are satisfactory."

Kodak's Chester J. Nowak pointed out that carefully controlled exposure and processing are required to avoid remaking negatives.

Rigid control of all steps was em-

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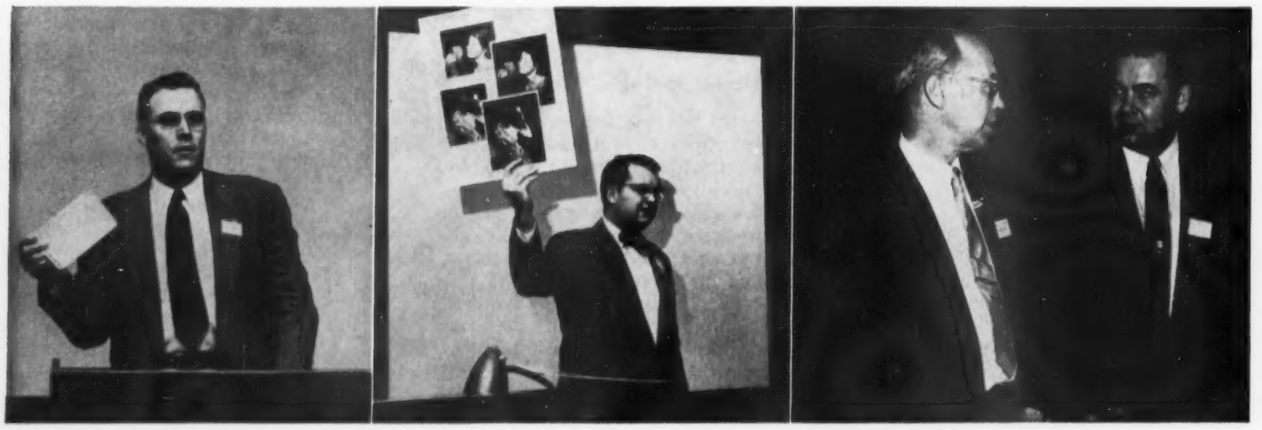


Rochester Institute of Technology's Graphic Arts Research Dept. is host to two-day meeting in April at Short-run Three-color Printing Symposium. Among those present were (left): V. L. Gardner, Lithochrome Corporation, Erie, Pa.; in center is shown Warren L. Rhodes, of RIT's Research Dept., and at right are Ralph M. Evans, director of Eastman Kodak's Color Technology Div., and Virgil P. Barta, Head, RIT's Research Dept.

Why Light Affects Color

By L. COURT BUTLER*

Lighting Engineer, White Plains, N. Y. Member American Society of Mechanical Engineers and the Illuminating Engineering Society. This author has also contributed articles to Journal of Illuminating Engineering, Yearbook of Optometry, Journal of Optometry, Lighting Magazine, *and others.*

BECAUSE of the variety of so-called Kelvin Color Temperatures now available in fluorescent lamps it will be wise to remember, when using artificial light to judge color, that it is mainly the spectral quality of the light, *i.e.*, the wave-length composition, comprising its visible radiations, that excite the percipient's visual sensation of color. Adequate light intensity is extremely important for ease in seeing, but it is not the primary factor where light is used for color work.

The question may be asked: "What is the best spectral quality of light for accurate color matching?" The general belief seems to be *North skylight*, which is available for only about 4 hrs. on clear days during the winter. It will be found in the following spectroanalyses of daylight, incandescent light, and the various designations of fluorescent light, *that this opinion is mainly erroneous.* It will be seen that *North skylight contains excessive amounts of blue and violet and is deficient in red.* This makes it excellent for critical visual tasks like inspection work, grading leather skins, etc., but not for judging color. Blue or overcast sky light, as will be shown, consists of the most evenly balanced daylight, and, at least, theoretically, should prove the best light for color matching or grading.

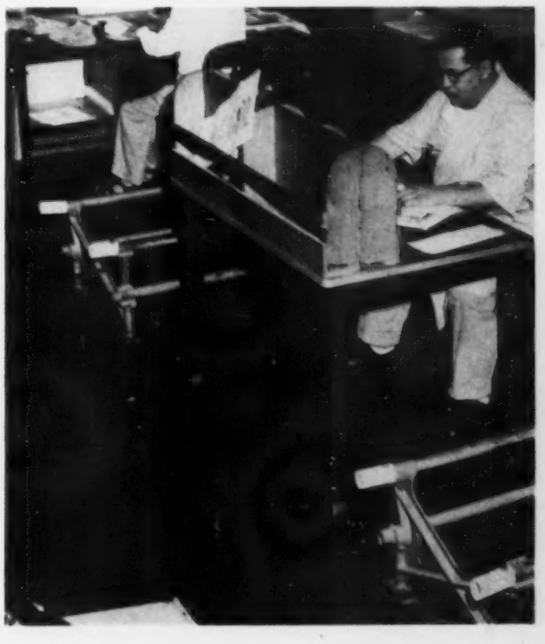
Daylight seems to vary with the season, the weather, the hour, and the direction of the sun. But the properties of sunlight emanating from the photosphere of the sun remain unchanged after passing through the compound gaseous mass formation surrounding the photosphere, known as the chromosphere, which has been estimated to comprise an average thickness of approx. 5000 mi. Add to this the spatial distance sunlight travels through the earth's atmosphere and we gain some idea of its diffused quality and the impossibility of artificially simulating such diffusion by man made means.

The visible spectrum consists of wavelengths within the range of 3800 to 8000 angstroms. Wavelengths within this range evoke impulses in the optical mechanism of the eye that activate or excite responses in a mosaic of minute nerve cells or receptors, called rods and cones, that cover the surface of the retina. The rods excite black and white vision and the cones color vision, producing color sensations coincident with the wavelengths stimuli of the reflected light entering the eye. *If the light contains an equal distribution of the energy of all wavelengths in the visible spectrum, all colors will be equally represented by the light and the optical system will receive and reproduce the exact likeness of all color seen.* Conversely, if the light does not contain an equal distribution of the energy of all wavelengths, all colors will not be equally represented by the light and the optical system will receive and reproduce impressions of all colors accordingly. *We look with the eye but we see with the mind; and we see only that which the stimuli in the light evokes as the optical counterpart of an object, in form, outline and color.* It is believed that these brief comments anent the physiological aspects of the visual function are pertinent to the psychological effects of variations in the spectral quality of light on "how we see what we see."

The manifold and extensive uses of color in art, commerce, and industry, indicate the need for a suitable spectral quality of artificial light, that will reflect colors as they appear in natural daylight, and, thus, eliminate the necessity of waiting upon the whimsicalities of the weather for clear day quality of light. The spectral characteristics of all fluorescent and incandescent light are impressed upon all color subjected to them and the effects of off-shading they produce make true color evaluation impossible. Fluorescent and incandescent light either overemphasize hue and saturation, accentuating off-colors which may predominate in the composition of the light, or attenuate hue, saturation and subtle tinges in colors, the counterpart of which are deficient in the composition of the light. Accordingly, *light, if it is to render true values to all colors, must contain an equal percentage of all colors in its spectrum.*

Because this is axiomatic, it has been necessary to find means of compensating for wavelength deficiencies in our artificial light media. One of these means consists of filtering incandescent filament light through a slightly violet-blue glass member, generally known as the Mac Beth filter. This filter holds back or absorbs most of the preponderant incandescent light rays and transmits only a percentage of the energy of each of the more prolific rays approximately equal to the blue and violet energy in the light, which is only about *10% of the light produced by the lamp.* (see spectroanalyses). Notwithstanding this waste of light energy, and the objectionable heat resulting therefrom, filtered light is widely used for closeup color matching.

An alternative means has been, and still is, to combine light from complementary sources, such as fluorescent and incandescent lamps. Back in 1917,



Anti Shin Barker — In many plants, floor space is at a premium. This is particularly true with respect to aisles between equipment items. In such cases, every possible precaution should be taken to prevent physical injury where foot traffic is frequent in the main aisles. A safety precaution was taken recently in the photoengraving department of the Miami (Fla.) *Herald*. A pair of badly bruised shins and occasional lost man hours—all due to bumping into the end of two photoengraving rack frames—prompted Ken Brouse, photoengraving superintendent, to mount short sections of rubber hose over the ends of the frame tubing where they extend into the traffic aisle. A hole was drilled through each end of the projecting tubing and a screw with washers and lock nuts fastens hose and tubing.

Fernand E. d'Humy obtained a U. S. Patent, covering the application of incandescent and mercury vapor lamps in a single luminaire. The author secured the rights under this patent from d'Humy for the General Electric Co. The basic principle of this patent was to make available a lighting unit containing lamps, each of which produced light energy rich in the wavelengths deficient in the other. Since the advent of the fluorescent lamp, mixtures of fluorescent and incandescent light are widely used where fairly good color rendition is necessary. However, *such mixtures are not suitable for accurate color discrimination, unless the lamps are especially designed for color work*. Such a combination of special lamps has been developed for this purpose, known as Butler Trulite. This light is highly recommended by color experts.

All mercury vapor light, although having the appearance of a continuum, contains four distinctly visible mercury lines or bands, *i.e.*, violet, blue, yellow-green and yellow; these band spectra do not merge with, but superimpose upon, any continuum. This applies also to fluorescent light, as the operating principle of the fluorescent lamp is similar to that of other electric discharge mercury vapor lamps.

The following spectroanalyses are indices to the percentages of band spectra energy contained in the wave-form compositions of daylight and of incandescent and different Kelvin color temperatures of fluorescent light. These data show why the spectral quality of artificial illumination differs from natural daylight, excepting the spectral distribution of the xenon lamp, which closely approximates blue sky light:

SOURCE AND QUALITY OF LIGHT	BAND ENERGY PERCENTAGES V	B	G	Y	O	R
Fluorescent soft white light	12%	9%	15%	26%	24%	14%
Fluorescent warm white de luxe	7	4	15	28	29	16
Fluorescent cool white de luxe	12	10	18	26	22	12
Fluorescent daylight	16	15	18	26	19	6
Incandescent light (500 w.)	4	8	16	20	23	29
Xenon lamp light	15	19	16	17.5	17	15.5
Natural light blue sky sunlight	15	19	18	17	16	15
Natural light overcast sky	16.5	18.5	17.5	17	15.5	15
Natural light North sky	22	24	17	15	12	10

The uneven distribution of band spectra energy characterized in all fluorescent and incandescent light is simulated in the seeming appearances of all colors, precluding positive and accurate color discrimination. The scientists are cognizant of the needs and the xenon lamp is the product of years of research and development, but in its present stage of development it is not economically practical for color matching application. At its present cost its use will be confined to highly specialized applications, such as moving picture projection, television, theatrical spot-lighting, search-light projection, etc. Being a quartz lamp, it emits ultraviolet radiations and its cost will continue to be relatively high, but the xenon lamp has a spectral quality so superior to other artificial light media, with a luminous efficiency exceeding incandescent light, that, in time, means will probably be found that will make it practical for color work.

Build Safety

Into New or Remodeled Printing Plant

By OLIN E. FREEDMAN*

**Olin E. Freedman, Printing Engineers, Chicago. Address delivered before National Safety Council Printing and Publishing Div., Chicago, October 1954.*

IN THE planning and construction of a new plant or the remodeling of an existing one, with possibly provision for expansion, some of the best opportunities for improvement in safety methods exist. That statement applies not only to the physical planning and the working out of those plans but also to the excellent opportunity to gain permanent adoption of practices which will reduce accident rates. Improved habits directed toward greater safety, as is well known, are not easy to instill in the minds of workers and supervisors in the same old surroundings to which they have become accustomed over extended periods. But when safety is taught along with other new motions in new or altered surroundings, correct actions and conduct can become virtually subconscious among the working force.

Another favorable consideration is that in planning a new layout, safety features can be incorporated at no more than negligible additional cost. Actually, most of the elements of planning for highly efficient production lead automatically to less hazardous working conditions.

Accident Reduction

Since approximately one-third of all accidents in the Graphic Arts are attributable to the mishandling of materials and objects, it is apparent that a good layout, providing proper storage, flow of work and working spaces for employees, will reduce those hazards very substantially. In a properly planned layout, orderly storage of the printers' principal material, which is paper stock mostly in rolls or on skids, will be provided. No plant layout is complete without careful study and planning of stock-storage areas. If these areas are worked out properly, it should seldom be necessary to move several loads or rolls in order to gain access to some particular lot. Such reduction in the number of items moved reduces the chance of accidents not only proportionately but to an even greater degree, for orderliness in itself makes much easier the movement of heavy rolls or skids.

Evolutionary Changes Without Plant Planning

It is axiomatic in the printing industry that virtually every successful business experiences evolutionary change. When that trend continues over a period of many years with no over-all plant planning layout, it can serve to create congested, awkward, inefficient conditions which are breeders of accidents. Frequently, a new machine which is required by the growth of the business must be provided for every individual

(*Continued on Page 128*)

$100 for PIA Building Fund—Elmer M. Pusey of Judd and Detweiler, Inc., (on left) recently accepted, on behalf of Printing Industry of America, a $100 contribution to the PIA Building Fund from Morris H. Reaves of the Washington (D. C.) Craftsman's Club (on right) while Albert O. Luther (center), president of the Club, looked on. This presentation was made during the Printing Week dinner in Washington, D. C., on Jan. 18, which was jointly sponsored by the Craftsman's Club and the Graphic Arts Assoc.

Improved Packaging Printing With Improved Flexography

By HARRY A. NASH*

*General Printing Ink Co., Div. Sun Chemical Corp., Long Island City, N. Y.

PART I.

A MAJORITY of all flexible and/or transparent packaging printing is accomplished by flexography. In 15 years this process has zoomed to prominence, and in the light of the new plastics and paper to come, its future increased use would seem to be assured.

With its rubber plates, quick make-ready presses, variety of web stock and quick-drying liquid inks, flexographic printing answers the needs of many packaging processes. Plastics—the rapidly expanding packaging medium—is readily adapted to flexography. Flexography in turn has grown with plastics, so that today much plastics printing is flexographic.

The best salesman of packaging printing must be the quality of the work itself. One should not be fooled by the fact that, in many instances, packaging is channeled to flexography because it is cheaper or appears to be, by today's standards, the more practical medium. With constant improvements in printing and resultant lower costs, we may well discover one day that the cost differential between one printing process and another simply isn't a factor any longer. Unless flexographic printing consistently produces *better* work, chances are it will be used only for the special requirements of foils, plastic films, etc. The flexographic pressman and his knowledge of the process will decide.

Can you, for example, print polyethylene, Pliofilm or Cellophane every day, under varying conditions, and always achieve the same results? Will the bind, the finish, be the same each time?

Of the four variable components of flexographic printing—plate, web stock, press and ink—the latter two present the greatest hazard of serious variation in quality. Ink, perhaps, is the trickier of these two, and it is here that quality-building efforts pay off best.

What is Flexographic Ink?

Flexographic ink (the alcohol-type considered exclusively in this article) is made up of three basic components: (1.) Color, (2.) Binder, and (3.) Solvent. Fundamentally, it is not any more complicated than that. The ink chemist has many different types of dyes and pigments from which to choose and many kinds of binding materials are at his disposal. Each will perform a specific function better than others.

Craftsmen Discuss Technical and Educational Features—A. E. Price, (third from left) sales manager of the Ander Chemical Co., has been made chairman of the Educational and Technical Committee of the 1955 Intl. Craftsman's Convention to be held in Cincinnati. Other members of his committee reading from left to right are: Jos. H. Jorling, vice president, MacDonald Printing Co., Inc.; Fred P. Hofferth, production manager, American Book Co.; and (on extreme right) Carl W. Aneshansel, vice president, Ander Chemical Co. This committee has the responsibility of arranging the technical and educational features of the 1955 Convention which will be held at the Netherland Plaza Hotel, Aug. 7-10.

Color

Color is obtained only by using a predetermined amount of pigment, or dye, or pigment-dye combinations. No amount of varnish, shellac, resin or other body-building materials can strengthen any color.

No pressman should be misled into believing that a kit of ink may be thinned again and again, just because it is thick in body. Coloring materials increase the viscosity of inks, but so do binding materials. It is, therefore, necessary to determine the ratio between color and binder in a given ink to safeguard against too much loss of color by addition of solvents. An ink consisting of 30% coloring material, for example, is stronger than one of only 15%, and the 30% ink may be thinned further before the color appears washed out. There may be no difference, however, between the original viscosity of the two inks.

Drawdowns

The best method of finding out how far an ink may be diluted before losing color is not by seeing whether a mixing stick will stand up in the ink, but by making a drawdown in the following manner:

1. Stir the ink thoroughly for a few minutes.
2. On the inside of a coffee container, measure and mark the halfway point, then measure and mark the upper half into four equal divisions.
3. Fill the container with ink to the halfway mark.
4. With a knife blade or similar object, dip into the container of ink and place a few drops on the stock to be printed.
5. With a firm, steady pressure, draw a scraper or wide putty knife over the ink drop so that it spreads out in an even, thin film on the surface of the stock.
6. Label this drawdown "100% strength."
7. After adding *alcohol* to the first mark over the half-full point, stir and make another drawdown. Label it "Thinned 20%."
8. Repeat this process, adding *ink* to the next mark, and label "Thinned 15%."
9. If you add *alcohol* again to the third mark, you have "Thinned 30%."

(*Continued on Page 78*)

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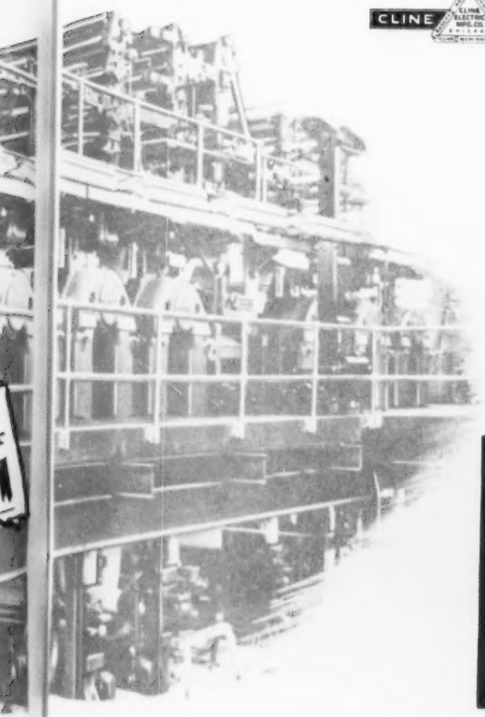

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Be sure to stir the container thoroughly with each addition. In this way, you can match drawdowns with the color of your sample copy and you can gauge just how much thinner you can use before washing out the color. In the case of step No. 8 above (Thinned 15%) the quantity equivalent is 1 gal. of solvent to a 5 gal. kit of ink and 10 gallons to a 50-gal. drum. In step No. 9, double this amount of solvent is used.

These drawdowns will clearly illustrate that as you add more thinner, the color weakens and the ink gloss lessens and, if the stock is absorbent, the ink penetrates further into the sheet. But remember that for the moment we are dealing only with color and how it is affected by the addition of solvent. We will discuss later how additional solvent affects the binding materials.

There is a definite limit to which one can go in adding solvent. The only way to find this limit is to keep adding solvents and making drawdowns until it is apparent you have gone too far. This limit is reached when:

1. The color is no longer satisfactory.
2. The gloss is unsatisfactory.
3. The ink will not bind to the stock.
4. The ink is too thin for proper press running viscosity.

There are many printers who, knowing the value of drawdowns, state that the 5 min. taken in making them have started many jobs off on the right track and kept them there. There is only one way to learn their worth—make them.

Moreover, drawdowns as well as other relating memoranda should be filed for the repeat run of the same jobs. Such time-saving information, classified for reference, will enable each printer to know from a few ounces of ink on a piece of paper whether a new ink will meet his requirements. He has compiled a standard of his own and has a record of it for future use.

Pigments and Dyes

The coloring material in a flexographic ink may be a pigment, a dye or a mixture of the two. Each has its place, for each can contribute to color a quality that the other cannot.

Pigmented colors, for example, are light-fast; dyes are not. Pigmented colors will not fade; dyes will. Pigmented colors are opaque, and do a good job in covering unwanted colors on which they may be printed; dyes are transparent, and if there are colors underneath, they will show through. If printed matter is of short life in direct sunlight, then a dye may be used; if the printed matter is subject to direct sunlight, the only way to prevent the colors from fading or washing out is to specify a light-fast pigmented ink.

Should you want to cover up a paper stock such as unbleached kraft, you would use opaque pigmented colors since a dye ink, being transparent, would be more radically influenced by the brown color of the kraft stock. A dye ink on aluminum foil is desirable if you wish the metallic lustre of the foil to influence the color. Bear in mind, though, that only color is being considered here and that there are other factors that dictate whether pigments or dyes may be used.

Pigments are dull in appearance as compared to dyes which are brilliant and bright. However, dyes are subject to bleeding and break down when subjected to excessive heat, fatty acids and some adhesives and many chemicals.

The following summaries indicate the properties of each:

Pigments 100%	Dyes 100%
1. Are opaque in color	1. Are transparent in color
2. Are color fast	2. Will fade under sunlight
3. Tend to be dull in appearance	3. Are brilliant and bright
4. Resist heat and organic materials	4. Will "bleed" in contact with many organic materials.

Some pigmented inks and dye inks are compatible; others are not, and cannot be mixed together. The ink chemist can recommend whether a pigment-dye combination is both desirable and practical. A small percentage of dye material mixed with pigments, for example, will give the color sparkle and will not seriously affect permanence or opacity.

Binder

Once a color is selected, it is necessary to mix it with some other liquid to transfer it, by means of the printing press, into an even ink film on the web; and to provide proper adhesion to the surface. The best materials for accomplishing this purpose are resins, both natural and synthetic, proteins and plastics. There are a great many types of each in commercial use from which the chemist selects the one that best meets the requirements of any specific job.

Binding agents have a three-fold purpose:

1. To hold together the color particles evenly and to maintain uniformity of the liquid ink.
2. To give proper adhesion of the ink film to the web.
3. To control ink film gloss and penetration into the printed surface.

It is easy to understand that no printer wants the ink to spatter all over the web, nor does he want the ink film on the web to have a small blotch of color here and another blotch there, like s speckled trout. The proper amount of binder will transfer a smooth even color and maintain good ink viscosity over the ink rollers and printing plates.

The only materials that promote adhesion of the ink film to the web are in the binder, for neither coloring materials nor drying solvents have any adhesive properties whatsoever. If the proper binding material is present in correct proportion, no ink film will rub off under practical conditions.

If the paper stock does not have a high surface finish and is inclined to be porous by nature, you need a higher percentage of binder to increase viscosity and thus retain more ink on the surface. The more ink on the surface, the glossier it will appear; the more ink absorbed by the paper, the duller the job. For example, an ink that prints well on a hard surface stock will appear dull and washed out when used on a soft sulphite. However, if you want to use a glassine ink on a sulphite stock, it can be accomplished by adding more binder.

What happens when more binder is added? It changes the ink formula to a new one in which there is a greater percentage of binder, and a correspondingly lower percentage of the other two components—color and solvent. For you cannot change one component without affecting the other, two.

Considering one at a time, it can be seen that adding more binder will increase gloss and enhance adhesion, but only at the expense of color which gives opacity. Better opacity may be obtained by adding more color if you are willing to accept less gloss. But both color and binder together must remain in balance with the solvent. Should you go too far with color and binder, then drying and blocking troubles will follow, unless you bring the solvent proportion back into balance.

The ink supplier presumably has incorporated the proper amount of binder in the ink to achieve efficient adhesion. If correct adhesion is not being obtained, the amount of solvent that has been added should be checked first—there probably is too much. If it is found that more binder is required for better adhesion or higher gloss, for example, the addition should be made in repeated small quantities. Adding "plenty in one shot" can give unwanted results. In one case remarkable lustre was acquired but the ink never dried, as there was too little solvent to dry the extra load of binder. Again, the drawdown is the pilot operation as it provides the easiest, quickest and least expensive route to the most direct answer.

(*To Be Continued*)

New Heidelberg Cylinder—Many persons viewed the 21 in. by 28 in. Original Heidelberg Cylinder Press at a recent Los Angeles showing. Heidelberg Western Sales Co. extended invitations to printers to see a practical demonstration. Augie Metzenheim, Heidelberg demonstrator, explains features of the Cylinder.

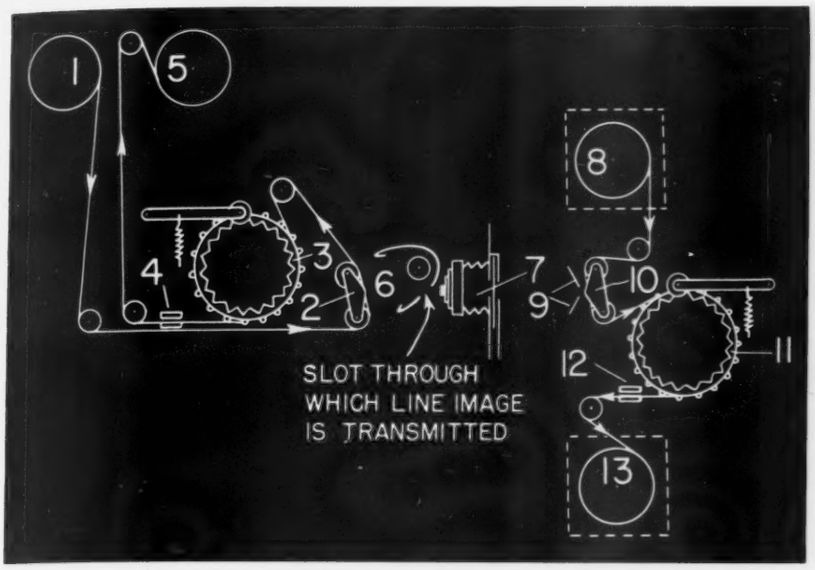


Fig. 1—*The negative unit of the Justigraph machine which provides the point size of type desired from the typewritten copy and reproduces the lines to a common center on a paper negative, preparatory to placing the resultant negative in the second unit in which is reproduced the line-justified positive in selected point size. The key parts of the unit are identified as follows:*

1.—*Typewritten roll of copy*
2.—*Inclinable copy platen adjustable to expand or condense type face*
3.—*Nubbed line positioning wheel*
4.—*Feeding device*
5.—*Rewound copy*
6.—*15 w. green fluorescent tube mounted in reflector*
7.—*Lens and shutter*
8.—*Roll of sensitized paper*
9.—*Mask*
10.—*Sensitized paper platen, automatically inclinable to regulate size of type*
11.—*Nubbed positioning wheel*
12.—*Feeding device*
13.—*Exposed negative paper*

Justigraph — *Fully justified lines*

produced from unjustified typewritten copy in positive form on two unit machine in selected point size—End product used for photomechanical reproduction.

PHOTOJUSTIFICATION with respect to type lines may or may not be a familiar word in Graphic Arts terminology, but Leroy F. Dyer has given it new meaning in the development of a machine to be known as the Justigraph. In this case, photojustifying can be defined as the justification of typewritten straightmatter lines by photomechanical means.

Nearly three years of development work have gone into the Justigraph machine by Inventor Dyer, who is owner of Wellesley Engravers, Wellesley, Mass. The method has been advanced to the point where, in addition to justifying unjustified lines to a pre-determined width, the typewritten copy may be reduced to any desired size between 5½ pt. and 12 pt., extended, condensed and boldface effects can be provided, incorrect lines can be deleted automatically, corrected lines can be inserted in exact position, and copy can be leaded to fit a predetermined space. The final product is a photographic positive on either paper or film for offset or photoengraving purposes.

100 Lines Per Min.

The operating speed of the present Justigraph machine is 100 lines per min. According to Dyer, in tests made on miniature models, copy was successfully processed at the rate of 180 lines per min.

In the Justigraph system, as now developed by Dyer, an I.B.M. Executive model electric typewriter is used for producing unjustified typewritten copy. The two unit Justigraph equipment consists of a negative unit which provides the size of type desired from the typewritten copy and centers the lines to a common axis, irrespective of the justification which will be required to make all lines of equal width. The other unit, called the Justigraph positive unit, provides the justified lines on either paper or film. Dyer states the two unit machine is capable of processing the continuous output of several electric typewriters. The operation of the negative unit is dependent upon the punched register and feed holes shown in Fig. 5.

Operation of the Machines

In order to understand how this has been accomplished by Leroy Dyer, we must examine the following explanation of the operation of the Justigraph units. He states the I.B.M. Executive model typewriter was chosen for use with the Justigraph machines because of its sharp carbon impressions and speed.

The typewriter has been modified to include several devices. It is equipped with a device for accommodating a 7 in., 9 in. or 11 in. wide roll of paper (Fig. 5), with a pre-punched row of holes along one side of the paper, a pin wheel feed to insure registration of the typed lines, and a punch device mounted on the carriage. The punch is used for cutting a small rectangular control hole in the right hand margin at the end of each typewritten line. Should an error occur in the typed line, the operator omits punching a hole and the line is retyped. The

Phototypographers Must Plan Properly

(Abstracted from address delivered by Carl P. Palmer, Printing Div., E. I. du Pont de Nemours & Co., Wilmington, Del., before convention of Intl. Assoc. of Printing House Craftsmen, Hotel Bellevue-Stratford, Philadelphia, August 1954)

TYPOGRAPHERS need the services of artists and the advice of printers more than ever before. We don't wish them to waste their time and substance performing non-essential and onerous details. The improper preparation of art, typography, and mechanicals for reproduction is costing the industry and the customer much too much. As phototypographers, we must plan properly and integrate our efforts with those who create the product given to the printer to reproduce.

Our aim is to save costs and the skills now tied up in present methods of casting and assembling type.... New Platemaking techniques are about to put the letterpress printer in active competition again with the lithographer. Ad composition for publications is now being set at a saving, and plate shipping costs are being reduced as the result of new engraving techniques harnessing phototypography. This is the jet age. Phototypography, as it is more widely used will enable us to keep pace with our times.

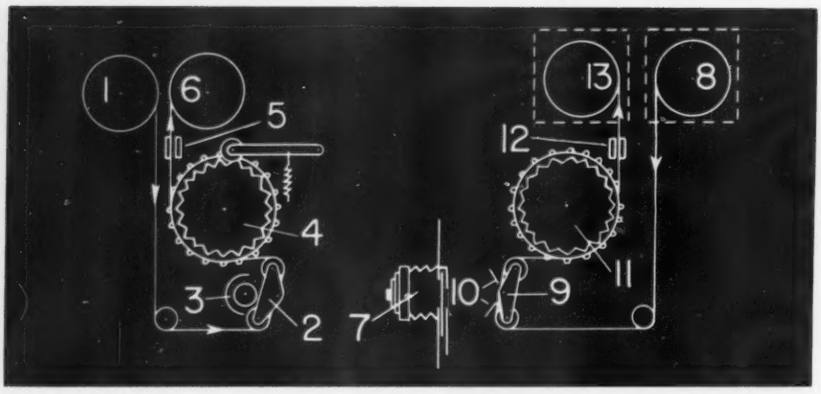


Fig. 2—*The positive unit of the Justigraph machine. In this machine is placed the negative produced in the unit shown in Fig. 1. This positive unit automatically justifies the centered lines to pre-determined line width by lateral expansion or contraction through photochemical means on either sensitized paper or film. The key parts of the unit are identified as follows:*

1.—*Processed negative roll of copy lines*
2.—*Inclinable negative support*
3.—*Fluorescent lamp with reflector*
4.—*Nubbed line positioning wheel*
5.—*Feeding device*
6.—*Rewound negative*
7.—*Lens and shutter which are automatically movable to justify lines*
8.—*Roll of sensitized paper or film*
9.—*Automatically tilted support for paper or film*
10.—*Mask*
11.—*Nubbed guide wheel*
12.—*Variable feeding device to space between lines*
13.—*Exposed paper or film*

Fig. 3—*The completed full-scale negative unit of the Justigraph machine as developed by Leroy F. Dyer of Wellesley Engravers, Wellesley, Mass. It is in this unit that the typewritten lines of copy are scaled to the point size desired and the lines centered in preparation for the justifying operation in the positive unit (Fig. 2). The operating speed of the machine is 100 lines per min. The unit is designed to provide a range of type sizes extending from 5½ pt. to 12 pt.*

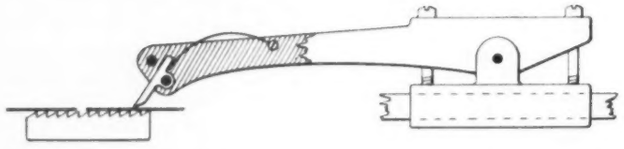


Fig. 4—*Side elevation diagram of the scanning pawl used on the negative unit of the Justigraph machine for centering the lines. As each line is positioned on the copy frame, the frame is moved laterally toward the right until its motion is stopped by engagement of the scanning pawl with a ratchet bar which is located beneath the area of copy paper in which the control hole is punched. The pawl (right) moves toward the left at the same speed which the copy frame (left) moves toward the right. When the pawl engages the ratchet bar through the control hole in the typewritten copy paper, the line is exactly centered. Exposure of the line is then made.*

A similar arrangement is used in the positive unit of the Justigraph machine for justifying the lines by lateral expansion or contraction. Here, the action of the pawl and ratchet, in conjunction with control holes in the original copy, causes the lens to move along its axis to focus the unequal lines of the negative to equal length in the positive. The focus of the camera is altered under control of the copy which is synchronized with the negative.

size of type and length of line in the finished positive are determined before the copy is typed in order to make the proper settings on the typewriter. A conversion chart has been made up for this purpose by Dyer. The widest line accommodated on the typewriter is 57 picas. The maximum line produced in the Justigraph positive unit measures 30 picas wide.

After typing, the paper roll containing the copy is removed from the typewriter and placed on a spool on the Justigraph negative unit (Figs. 1 and 3). A power rewind is employed first, in order to reverse the order of feed into the negative unit. Now, as the paper roll is fed into the unit it will be starting at the beginning of the copy.

Scanning Pawl

The paper copy roll is fed continuously into the negative unit under control of nubbed wheels corresponding to those on the typewriter, the nubs of which engage the punched registration holes of the paper web. Feeding is accomplished by a device consisting of parallel jaws which close on the paper web and draws it forward one line at each operating cycle. It is drawn through a copy frame illuminated by a 15 w. green fluorescent tube mounted in a reflector. As each line is positioned on the copy frame, the frame is moved laterally toward the right until its motion is stopped by engagement of a scanning pawl (Fig. 4) with a ratchet bar which is located beneath the area of copy paper in which the control hole is punched.

The pawl moves toward the left at the same speed the copy frame moves toward the right. When the pawl engages the ratchet bar through the control hole, a line is exactly centered.

Type Sizes from 5½ to 12 pt.

Exposure of the line is made at this point. The machine is equipped with scales for setting the focus of a small camera to the size of type desired. The following point sizes are obtainable: 5½, 6, 6½, 7, 7½, 8, 9, 10, 11 and 12 pts. Intermediate sizes are possible by manual focusing. The copy is exposed on sensitized paper, development of which provides a negative (Fig. 6) on which the lines are of the desired type size and centered, but not equal in length.

After developing, the negative roll produced on the first machine is placed in the Justigraph positive unit (Fig. 2) where it is fed through the exposure frame in the same manner as the copy paper is fed into the negative unit. In the positive unit, the rate of feed of the sensitized paper or film is adjustable to provide any desired amount of line spacing. This provides the line leading feature of the Justigraph method.

Justification of the Lines

In the Justigraph Positive Unit, justification of the lines to constant line width is accomplished. This is done by altering the focus of the camera under the control of the copy which is synchronized with the negative. The action of a pawl and

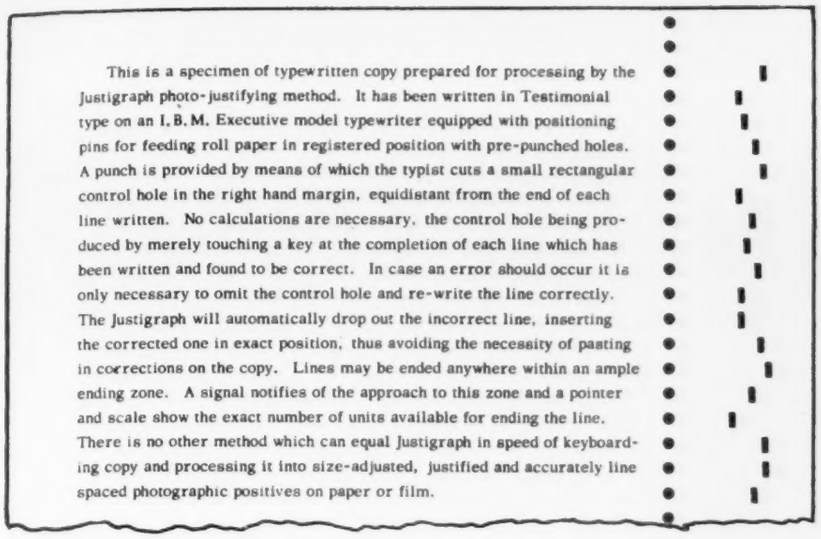

This is a specimen of typewritten copy prepared for processing by the Justigraph photo-justifying method. It has been written in Testimonial type on an I.B.M. Executive model typewriter equipped with positioning pins for feeding roll paper in registered position with pre-punched holes. A punch is provided by means of which the typist cuts a small rectangular control hole in the right hand margin, equidistant from the end of each line written. No calculations are necessary, the control hole being produced by merely touching a key at the completion of each line which has been written and found to be correct. In case an error should occur it is only necessary to omit the control hole and re-write the line correctly. The Justigraph will automatically drop out the incorrect line, inserting the corrected one in exact position, thus avoiding the necessity of pasting in corrections on the copy. Lines may be ended anywhere within an ample ending zone. A signal notifies of the approach to this zone and a pointer and scale show the exact number of units available for ending the line. There is no other method which can equal Justigraph in speed of keyboarding copy and processing it into size-adjusted, justified and accurately line spaced photographic positives on paper or film.

Fig. 5—*Copy produced on the I.B.M. Executive model electric typewriter showing the pre-punched round registration holes and punched rectangular control holes in the right hand margin. This unjustified copy is ready for processing on the Justigraph negative unit. The round registration holes are used for feeding the paper roll through the negative unit under control of nubbed wheels which engage the punched holes. The rectangular control holes serve to center the line in the negative unit before exposure of the line is made. This particular sample was produced on a 9 in. wide roll of paper.*

Fig. 6—*A negative sample produced on the Justigraph negative unit. This machine provides the size of type desired from the typewritten copy and centers the lines to a common axis, irrespective of the justification which will be required to make all lines of equal width. Typewritten copy is exposed on sensitized paper in this unit.*

ratchet, similar to that used in the negative unit (Fig. 4), in conjunction with control holes in the original copy causes the lens to move along its axis to focus the unequal lines of the negative to equal length in the positive.

Ordinarily, altering the length of lines photographically would result in proportional variation of their height. In the Justigraph method, lines are expanded or contracted laterally and height regulated independently of changes in width.

This is accomplished by tilting the frames holding the sensitized material an amount proportional to the lateral movement of the copy in the negative unit and the lens movement in the positive unit. Since only half the correction is made in each unit, the inventor asserts the angle of tilt is slight and distortion is eliminated in the positive unit (Fig. 7) due to the fact that the direction of tilt is opposite in the two units.

In this example of work done by the Justigraph method, Bookman Oldstyle, which closely resembles the typewriter face known as "Documentary," has been used for the original copy. Lines vary in length within a one-half inch ending zone. To illustrate the versatility of Justigraphing, this copy has been justified, condensed, and reduced in size.

Fig. 7—*The completed positive rendered on the Justigraph positive unit. This particular sample has been justified, condensed and reduced in size. The typewritten copy may be reduced to any desired size between 5½ pt. and 12 pt. by the Justigraph units. Exposure may be made on either sensitized paper or film. Leroy F. Dyer, inventor of the Justigraph, claims no distortion results from justification of the lines by photomechanical means.*

Obtaining Varied Effects

Provision is also made for adjusting the angle of presentation of the copy and negative in order to obtain expanded or condensed variations of the typewritten lines. Boldface effects may be obtained by excessive overexposure of the lines in the positive unit.

Incorrect lines which lack control holes are dealt with in the positive unit. When the scanning pawl in this unit fails to encounter a control hole, it travels beyond normal limits, actuating devices for locking the shutter of the camera and for preventing movement of the sensitized material, thereby causing the incorrect line to be deleted automatically.

As to the status of the Justigraph's development, the first full-scale negative unit (Fig. 3) has been completed, and work on the typewriter and positive units is expected to be started soon. Progress reports on the Justigraph are available to those interested. Requests should be made to: Leroy F. Dyer, Wellesley Engravers, Colonial Bldg., Wellesley, Mass.

Bull Sessions At GL Meeting Were Satisfying

IMMEDIATELY following the Non-metropolitan meeting of the Great Lakes Conference, Hotel Sheraton-Cadillac, Detroit, Sunday, Jan. 16, the meeting was resolved into two group sessions in different rooms. One was attended by composing room executives—the other by stereo-press executives.

The composing room "bull" session was presided over by Kenneth F. Ingle, Bloomington (Ind.) *Herald-Telephone*, and John Ferrier, Wabash (Ind.) *Plain Dealer*.

Small Papers Adopt Dispatch Ideas

An informal clinic discussion was later held on problems plaguing composing room operation on small newspapers. It was apparent that some small dailies have adapted dispatch system ideas from the metropolitan papers. Several production executives present reported successful installation of a dispatch system on their newspapers and pointed out advantages in correctly funneling necessary material for ads to the composing room. The importance of such a system in saving the time of highly paid composing room workers was also cited.

Lower Machine Speeds Produce More

Considerable talk on linecasting machine speeds was heard. Most agreed that reduced speed provided best all-around operation and that 8 lines per min. was about right for production by the smaller papers. One mechanical executive said that faster speeds were practical if newspapers would adopt sound programs of preventive maintenance. Faster speeds, he added, are not possible unless equipment is maintained at peak efficiency at all times. Harold Hoots, production manager, Decatur Newspapers, Decatur, Ill., observed that maintenance time goes up on machines run at 12 lines per min. but that the increase in production is greater in proportion.

Non-Metropolitan Press-Stereo

At the Press-Stereo Clinic, Merle Hawk, Press-Stereo Supt., Frankfort (Ind.) *Morning-Times*, and Bob Frame, Press-Stereo Supt., Zanesville (O.) *Times-Signal*, served as chairman and co-chairman respectively.

The question was asked with respect to the proper handling of combinations for stereotype molding. One executive stated that in order to get the price advantage he orders 24 hard corks of ⅛ in. thickness at a time. He uses a cork and board combination. He has found it advantageous to use the corks in sequence rather than to mold continuously from one cork during the day. Usually, he said, there is a break-in period required which extends over two or three days' usage for the corks. From the discus-

(*Continued on Page 118*)

One-Bite Etcher—This is the Acme One-Bite Etcher with the cover closed. Outside dimensions of this cabinet in this position is 60¾ in. wide by 39½ in. deep by 51½ in. high. Drain control valve can be seen at lower left.

Acme One-Bite Etcher Described

NEA Service, Inc.'s Acme One-Bite Etcher is designed to etch halftone, line and combination halftone and line engravings in a continuous operation. Using the Acme Z-M (zinc-magnesium) plates, pre-etching procedures are similar to those for making regular zinc engravings. Size of the unit is 60¾ in. wide by 39½ in. deep by 51½ in. high with the cover closed.

It is reported an all-halftone (65 line screen) flat can be etched in 4 min. to 5 min. On line work, a depth of 0.025 in. is reached in 12 min.; 0.040 in. in 20 min. to 22 min.

Cold topping, printing down and dyeing are all done with ordinary zinc engraving techniques. First etching operation is to scum or flat etch the printed flats with a dilute nitric acid solution. Scumming removes the 0.005 in. zinc coating in the unexposed (non-printing) areas of the plate. Scumming also gives a starting etch of about 0.0005 in. to 0.001 in. in the magnesium.

The scummed flat is attached (in inverted position) to the cover of the etcher by four clamps. Controls are set, the cover is lowered and etching begins.

Control Instruments

On the control panel are the temperature gauge on which can be read the temperature of the etching fluid; the thermostat gauge which allows for setting the temperature above which the etchant is not allowed to go; the timer by which the length of the etching cycle is determined; the blue warning light which signifies by lighting up that the etchant has reached the upper temperature set on the thermostat and that the cooling unit is being turned on; and the start and stop buttons. One safety feature of the unit is an automatic shut off which stops operation of the machine if its cover is lifted anytime during the etching cycle.

The etching fluid is sprayed upward against the plate under 8 lbs. to 12 lbs. pressure. There are seven stationary nozzles in the spray head. Four are 11 in. from the center, two are 13 in. from the center and one is located in the center of the spray head at an angle of 90 deg. to the plate to be etched.

Etching Solution Temperatures

Working temperatures of the etching solution are usually held between 115 deg. and 118 deg. F. with a top of 120 deg. F. However, the type of work being done may vary the optimum temperature. For example, in newspaper work where screens up to 65 line only in combination with line work are encountered, the best working temperature was found to be 100 deg. to 115 deg. F. Those are the findings of William F. Alexander, engraving superintendent of the Cleveland *Press* and holder of the U. S. patent on the zinc-magnesium plate used in the process. For 100 line screen and line combination work the higher temperature range is recommended.

Should the temperature of the etchant rise to the upper limit set on the thermostat, a blue light on the control panel flashes on and the cooling unit is turned on automatically. This consists of a ¾ T. refrigeration unit which is adequate to control the most wide open plates.

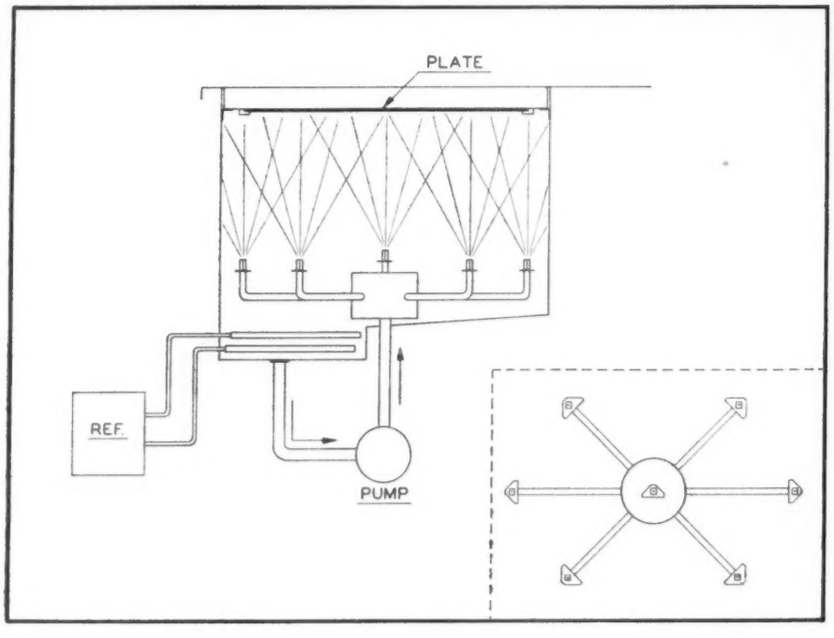
Halftone Etching Stops

During the etching cycle, halftone portions of the engraving will stop etching when a depth of about 0.006 in. is reached in the interstices between dots. The line portions will continue to etch. Reason is that the chemical action of the etchant on the zinc and magnesium causes a banking material to form on the sides of the dots and lines, preventing horizontal etching. The first 0.002 in. of this material deposited is very hard. It stops undercutting in all areas. During the rest of the etch the banking material continues to build up onto this first 0.002 in. The interstices in halftone work quickly fill up with banking material and stop the etching action. Line work, being more open, continues to etch.

After etching, the flats are dried and brushed to loosen the banking residue remaining in the interstices. A swabbing with a dilute nitric acid solution removes this residue.

After a flat has been processed the etching fluid is drained off by depressing the drain control valve with foot pressure. Hot water inlet in the machine is used for flushing the tank before putting in a new etching bath for the next flat.

A ½ h.p. motor with variable speed control is employed to drive the pump. The refrigerating unit is separately powered.



This ad was set the ECONOMICAL way

. . . *on a new RANGEMASTER Linotype*

This sample food store ad was *keyboarded* from the main magazines of a new Rangemaster Model 35 Mixer Linotype.

Costly hand setting and "cutting-in" were eliminated by keyboarding the intricate mixed composition, and the uniform Linotype slugs were locked up in jigtime—another economy!

No side magazines were needed because the Rangemaster Model 35 sets sizes through normal 36- and condensed 48-pt. —a main magazine capacity *no other mixer can match.*

New Rangemaster Linotypes provide *unequalled* type range and operating efficiency for setting big heads and display.

They can economize for *you.*

Phone or write your Linotype Agency today.

Hydraquadders
Need No Maintenance

Willmott Lewis, Jr., Production Manager of *The Evening Star* and *The Sunday Star,* Washington, D. C., states that seven Hydraquadders "have given us very satisfactory service . . . very easy to operate, and, so far, maintenance free."

Linotype's new Hydraquadder will give you complete satisfaction, too. Ask your Linotype Agency for details.

MERGENTHALER LINOTYPE COMPANY
29 Ryerson Street, Brooklyn 5, N. Y.

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• LINOTYPE •

Agencies: Atlanta, Boston, Chicago, Cleveland, Dallas, Los Angeles, New York, San Francisco. In Canada: Canadian Linotype, Limited, Toronto, Ontario

L E A D E R S H I P T H R O U G H R E S E A R C H

One-Day School For Printing Employees

EMPLOYEES of Dowd Press, Inc., Charlotte, N. C., and Graphic Press, Inc., Raleigh, N. C., are now working with a better understanding of their jobs and their companies. That's because they went back to school for one day.

They participated in the Printing Industry of America and the Lithographic Technical Foundation's program, "How Our Business System Operates." The study program was presented in each case by William F. Gutwein, labor relations consultant from Louisville, Ky.

Purposes of the study program include explaining competition in the printing industry, creating a climate favorable to control and reduction of operating costs, and developing understanding of the management problems.

Dowd Press, Inc., conducted its program at the Charlotte Hotel on Jan. 18, 1955, concluding with a banquet for all those who participated. Braxton Flye, general manager of Graphic Press, Inc., scheduled that company's meeting in the plant during working hours (see the accompanying picture).

How does the program work? Carey Dowd of Dowd Press answers this way: "On the day that our employees participated in the HOBSO (How Our Business System Operates) discussion, we were ready to take on any printing plant in the country."

Class in Pressroom — William F. Gutwein, labor relations consultant, gives employees of Graphic Press, Inc., Raleigh, N. C., some explanation on How Our Business System Operates. It's part of Printing Industry of America and the Lithographic Technical Foundation's program for informing workers in the printing industry about management problems.

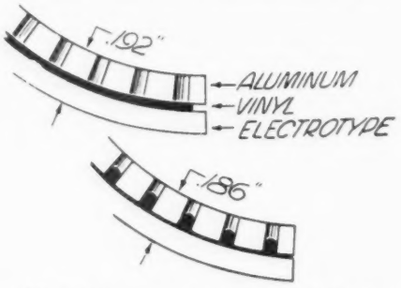
Proof Presses— Operate Safely

(From Bulletin published by Intl. Typographic Composition Asso. Most of the suggestions presented were taken from *The Safety Manual for the Graphic Arts Industry*, published by the National Safety Council.)

1. Proof press operators should be thoroughly instructed in safe operating habits and warned about the natural hazards of the machine. Quite often the newest employees are broken in on proof presses; they are not accustomed to established composing room customs and routines, nor are they familiar with equipment. If possible, send operators to instruction classes operated by proof press manufacturers.
2. Instruction on handling of galleys and type forms should be given new employees. Telling isn't enough. A supervisor should watch the new employee and see that he gets practice in safe handling methods.
3. Make sure fingers and hands are clear of all parts except actual controls when the press is in operation.
4. Loose clothing is a hazard and should be avoided.
5. On some newer electric proof presses, sensitive safety bars are included as standard equipment. This bar hitting a slight obstruction will stop the forward travel of the roller-cylinder assembly immediately. A safety bumper bar may often be installed on an older press.
6. Press cabinet doors should be kept closed at all times except when opened for use. Squat down to look into cabinet; don't lean over with hands on press.
7. Protective guards over operating pedals are recommended. This prevents their being operated accidentally or the tripping of the starting mechanism by dropping an object on it.

Lightweight Curved Plate ➔

A PROCESS for manufacturing light weight curved electrotype and stereotype plates has been announced by Printing Plate Supply Co. It is called the Color-Line process. Primary objectives in developing the plate were to provide: (1) A lighter weight and greater strength plate that would permit higher printing press production speeds, and (2) To reduce plate working on the press to make possible longer runs because of reduced plate wear. The laminated plate consists of three parts: An aluminum base or saddle (perforated with holes spaced equi-distantly), a thin sheet of rigid vinyl plastic, and a thin gauge electrotype all bonded together under heat and pressure to form (in effect) a one piece curved printing plate.



These diagrams are representative of Printing Plate Supply Co.'s Color-Line laminated curved printing plate. In the upper diagram is shown the Goodrich Geon plastic liner, the thin electrotype and the perforated aluminum saddle. Under heat and pressure, the plastic is softened and some of it is forced into the perforations in the aluminum saddle. The action of heat and pressure bonds all three elements together to form a lightweight one-piece plate which reduces considerably the effects of centrifugal force when the printing press is in operation.

To make the Color-Line plate, a 0.020 in. thick sheet of rigid vinyl plastic, made from B. F. Goodrich Chemical Co.'s Geon high impact resin, is bonded to the perforated aluminum base. The thin electrotype printing plate is put on top of the plastic and the assembly is preheated in an oven to 350 deg. After pre-heating, the laminated plate is placed in what is called a cooling press at about 100 T. pressure. The 0.020 in. now softened plastic sheet is reduced in thickness about 0.004 in. because some of it is forced under this pressure into the holes in the aluminum backing or saddle. Sponsor states the bonded elements make a strong, accurate and light weight printing plate.

During the time the plate is under pressure in the cooling press, it is also cooled and the plastic hardens again.

The forming dies in the cooling press are accurately made so the finished plate tolerances are very good. In the press, the dies close in on bearers so that uniformity is obtained for all plates. The curvature of the dies in the cooling press is such that the bonded plate will conform exactly to the segmental diameter of the plate cylinder on the printing press.

Pre-makeready may also be put into the plate by placing a paper treating mat over the face of the plate at the time it is being formed in the cooling press. In this way, the printing level of the face of the plate may be varied as indicated by the pressman. For instance, the highlights may be lowered and the solid areas may be raised to conform to pressroom practice.

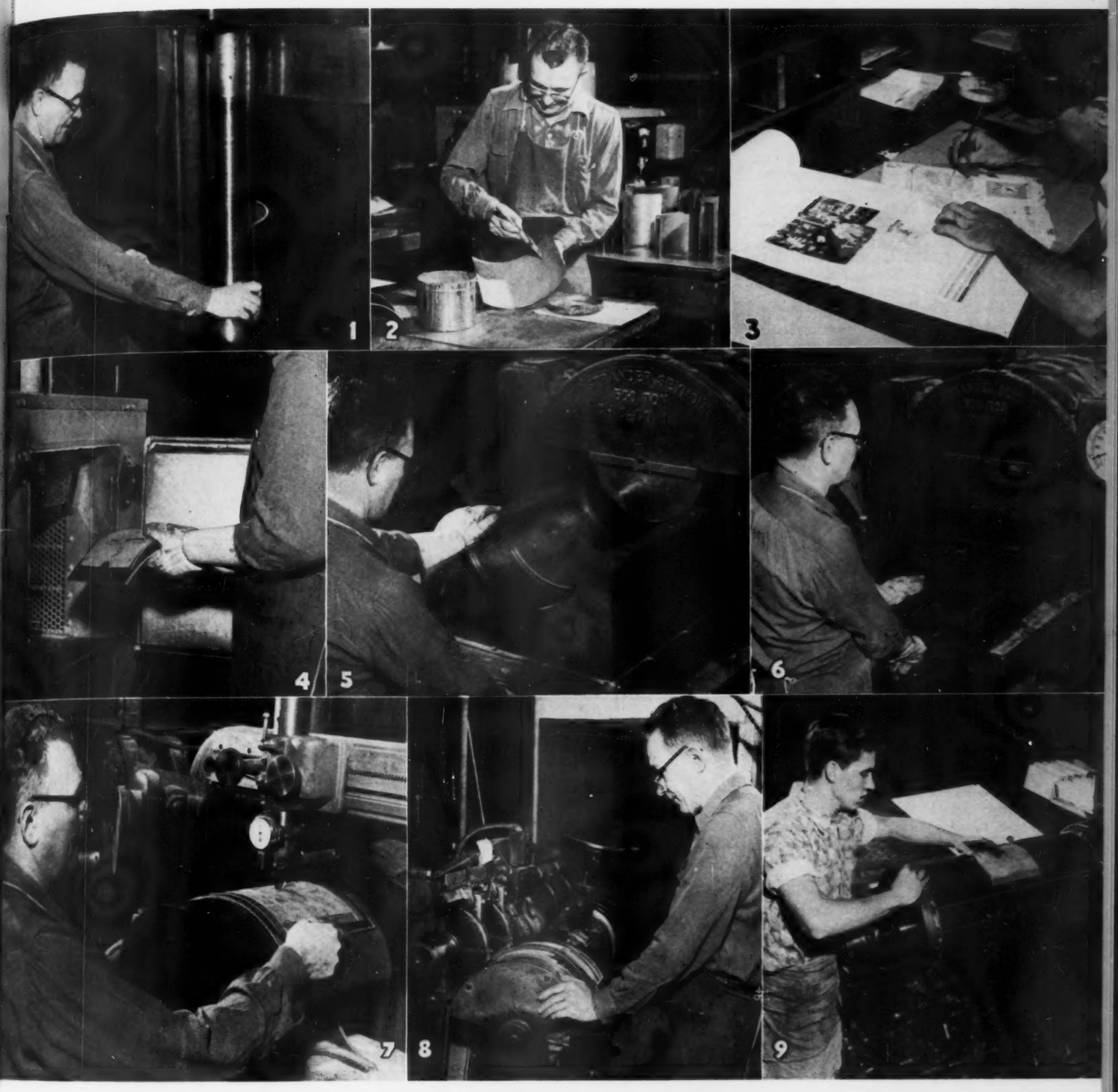
Officials at Printing Plate Supply Co. state that the process may be applied to stereotype plates and are equipping a plant to make Centrifugal Cast stereotypes. No details respecting fabrication of such plates have been released.

For further details regarding the Color-Line Plate, please mention PEE No. 495 in your request.

Kodak Photo Resist

Kodak Photo Resist, Eastman's sensitized plastic coating for metal plates used in photomechanical reproduction, it is now announced, is available in stainless steel drums containing 50 lbs., or approx. 6 gal.

The resist has heretofore been available in 1 qt. bottles. The new quantity is being stocked at the request of major users. It is claimed the resist is of consistent uniformity, is free from effects humidity and temperature and provides better resistance to acids. For further information, please mention PEE No. 496 in your request to *Printing Equipment Engineer*.



Processing the Color-Line Plate

1.—*In a vertical plate bender, the aluminum saddle and Geon plastic sheeting are formed to the same curvature as the printing press cylinder. The thin electrotypes are also formed here.*

2.—*A thin coat of special cement is brushed on the back of the thin electrotype plate.*

3.—*Here is being cut a treating mat which is placed in register with the printing face of the plate to protect the highlight areas when the plate is put under pressure in the cooling press.*

4.—*The plate with treating mat is now placed in an oven for 4 min. at 350 deg. F. The plastic is softened during this baking period.*

5.—*After the plate assembly has been removed from the oven, it is placed in a cooling press.*

6.—*The cooling press bed is closed and the plate is subjected to 100 T. pressure. The pressure not only forces some of the plastic into the holes in the aluminum saddle but virtually welds the three plate elements together.*

7.—*After the plate has been removed from the cooling press it is checked on a micrometer gauge, not only for overall thickness, but also to see that the highlight and shadow areas of the plate are in proper relationship to each other with respect to printing height.*

8.—*Next, the plate is trimmed and beveled. The plate is held on the curved cylinder segment under cushioned straps.*

9.—*The plate is locked on the cylinder of the proof press. It is held in place by hooks riding in slots which are similar to the hooks used on the production press cylinder.*

TTS Operated Linotypes Are Stopped When Normal Functions Interrupted

By R. D. FISHER *
**Ada (Okla.) Evening News.*

TWO of a battery of seven machines in our plant are Model 31 Linotypes equipped with Teletypesetter keyboard operating units. These two machines are operated by slow-speed Teletypesetter units and are geared to run 7⅛ lines per min. To reduce down time (when the machine's distributor spirals become locked or when the unit runs out of tape) a stop light-warning system has been installed. Suitably wired, this system consists primarily of a transformer, buzzers, microswitches, a solenoid, a contact point and different color lamps for each machine.

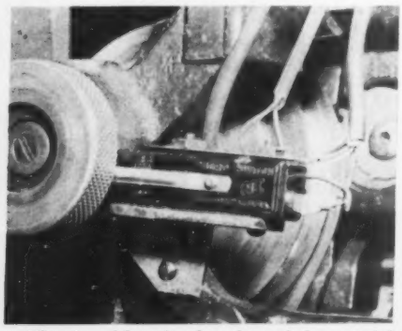


Fig. 1.—*Mounting for microswitch on special bracket on Linotype distributor. When spiral automatics lock and starting lever flange is snapped inward toward clutch bracket, the switch is caused to make contact. Switch is of normally open type.*

A small microswitch is mounted on a bracket on the distributor clutch bracket (Fig. 1). The switch is mounted so that it just clears the distributor clutch starting lever flange. When the spiral automatics become locked and the starting lever flange is snapped inward toward the distributor clutch bracket, it causes the switch to make contact. This particular switch is the normally open type. The starting lever flange should be relocated to give more clearance for the switch. However, this switch will work just as readily with the starting lever flange in its original position.

There are a number of lights with different colors for each given machine (see diagram), also a buzzer that sounds when the distributor on any one of the seven machines stops or when either of the Teletypesetter units completes a roll of tape. The machinist glances at the board on which the different colored lights are mounted when the buzzer sounds to see which machine has stopped.

While this discussion is about a three machine hookup, any number of machines can be supplied.

A 25 v. transformer is used instead of the regular 110 v. current so there is no danger of the machinist or the operator getting shocked when the switches or solenoid operate.

A bracket was fashioned on which is mounted another small microswitch directly in line, slightly below and approx. 1 in. to the right (facing machine) of the tape control feed lever and positioned so that the switch would be closed when the unit is in operating position. In other words, when the Teletypesetter unit is turned on, the switch would be turned on.

Then on the retaining lid of the unit is inserted a Linotype assembler matrix catch spring (No. D-18) on top of the retaining lid plate. It is not positioned under the shims as this would cause more than the specified 0.006 in. to 0.008 in. clearance for the tape to pass. It is important not to permit greater clearance here.

Using a 3/16 in. drill, a hole was drilled in the tape guide (Fig. 2) missing the top plate by approx. 1/16 in. Thus if the tape guide in the future had to be repositioned, it would not be necessary to disturb the insulated screw. Being unable to find a screw with a head as large as was required, a ½ in. rivet washer was brazed to the head of a 4x48 screw, ⅜ in. long, and the head was machined down smooth. An insulating bushing made of No. 10 varnished tubing was then placed in the hole drilled in the tape guide and an insulating washer (Linotype's Part No. C-1926—Cut out insulator) was then placed on top and bottom of the screw, securing them with a nut on the bottom. This insulated the screw completely. A wire was brought from one side of the switch mounted on the distributor clutch bracket to one side of the switch mounted on the Teletypesetter unit directly below the tape feed control lever. Then from the other side of the switch on the distributor clutch bracket a wire was brought directly to the screw directly opposite the detent bracket mounting

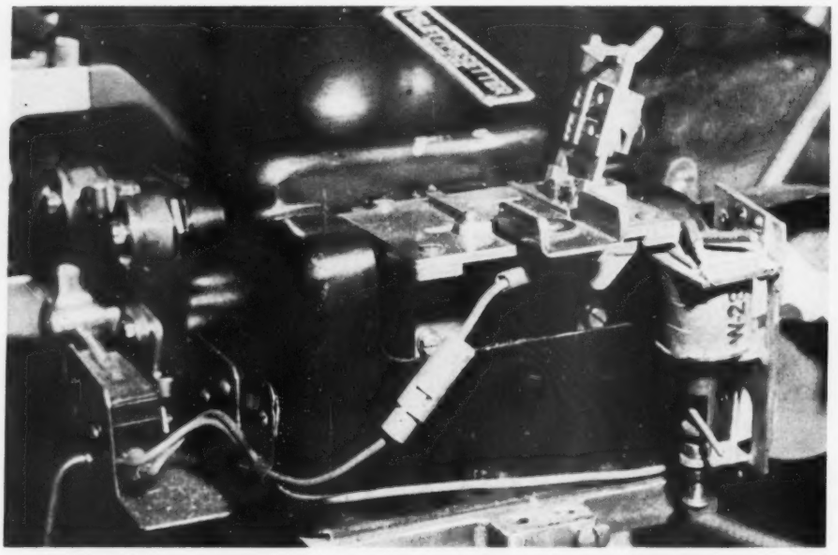


Fig. 2.—*Open view of TTS keyboard operating unit in plant of Ada (Okla.)* News. *Microswitch is shown directly in line, slightly below, and to the right (facing the machine) of the tape control feed lever. Also shown is one of the bayonet connectors. The solenoid (reclaimed from discarded marble control panel) is shown at right. The position of the matrix catch spring is shown on the retaining lid. In the tape guide (bottom) appears the head of the insulated screw which stops the unit when the tape is exhausted.*

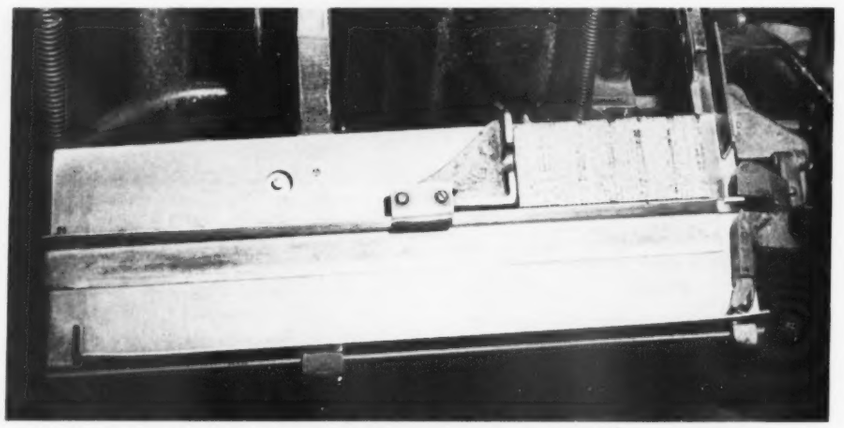


Fig. 3.—*View of slug galley on a TTS operated Linotype in plant of the Ada (Okla.)* Evening News. *When approx. 61 in. of slugs have been delivered into the galley. The contact point at left of l.h. galley bracket projects approx. 0.003 in. above the surface of the galley. The instant the leading slug touches the contact point a solenoid is energized to shut off the keyboard operating unit. (See accompanying diagram.)*

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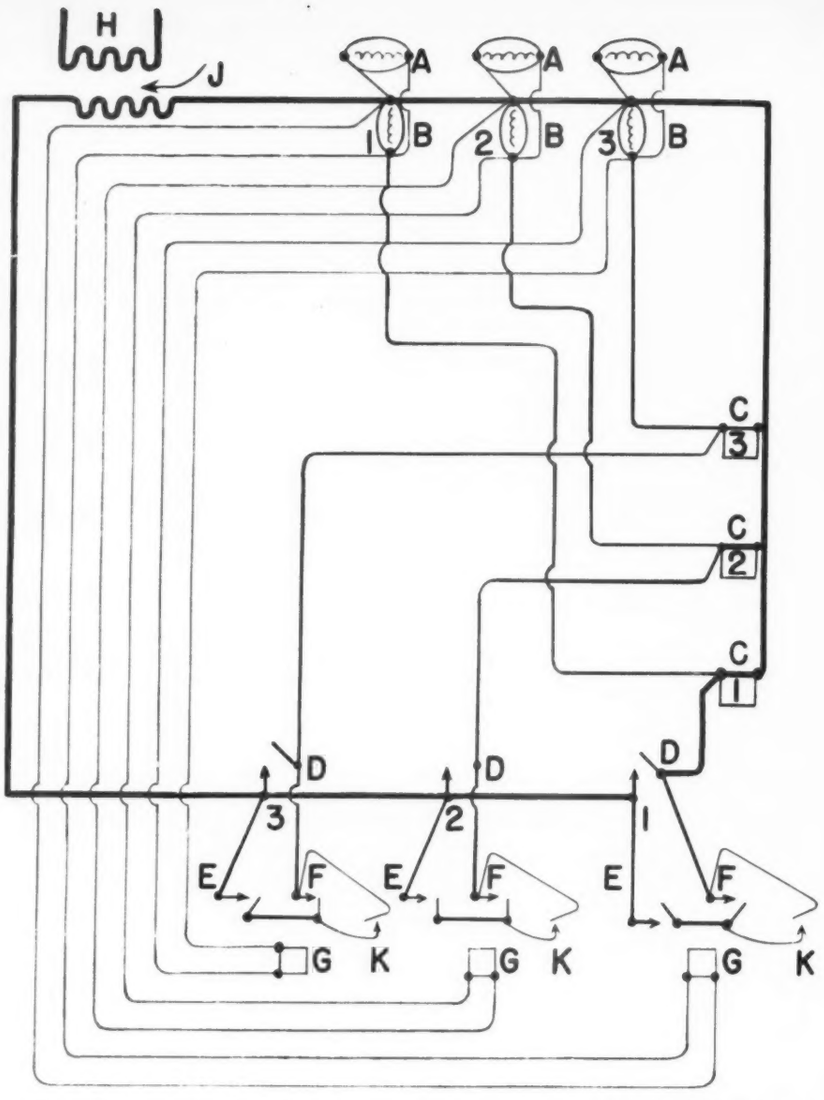
screw and with a spade tongue terminal this wire was fastened securely to the Teletypesetter unit itself. Then from the opposite side of the switch mounted directly below the tape feed control lever, a wire was brought to the insulated screw on the tape guide. The Teletypesetter tape is used as an insulating material between the insulated screw on the tape guide and the spring on the retaining lid (you need not have more than 2 oz. or 3 oz. pressure here to make a good contact). Now the instant the Teletypesetter runs out of tape and the end of the tape is pulled past the insulated screw, letting the spring on the retaining lid make contact, a light will go on and a buzzer sounds and continues to do so until the tape feed control lever is turned off and this in turn will turn off the light and buzzer. The tape signal will not operate unless the Teletypesetter unit is turned on, thereby closing the open type microswitch.

A solenoid switch (at right, Fig. 2) was mounted under the throw-out lever extension wire (all units have this wire but very few have it mounted if they do not use tape directly from the Associated Press or United Press wire) that extends from under cover of the unit. The upward pull of this switch is approx. 7 oz. to 8 oz. The two wires from the switch were connected to the two wires to the light on the machine face plate frame cover. Now, when for any reason the spirals become locked and the distributor stops or when the keyboard unit itself runs out of tape, the light comes on and the unit stops. All this is done automatically.

There is a light mounted on the face plate frame cover directly above the assembler slide return spring and another one on the machinist's bench. These lights will be illuminated when the spiral automatics become locked or when the unit runs out of tape. The buzzer is placed directly behind the machine. The buzzer is 4 v. to 40 v., a.c., and the lamps are 6 v.

Since the unit must be cleaned and oiled regularly, wire connectors, Cushman Motor Scooter Co.'s Parts No. A 1-83 Bayonet-Connectors, were used to connect the light wires. The connections were also used on the lamp mounted on the face plate frame cover. All that is necessary to remove either of these from the machine is to disconnect the wire connectors. The microswitches used were purchased from the Micro Switch Co., Freeport, Ill. The solenoid switch used was salvaged from an old marble control board. Any small solenoid or magnetic switch may be used if adaptable.



Wiring diagram for the Fisher Teletypesetter-operated Linotype shut-off device with lamp signals at machine and at machinist's bench. The hookup functions to stop the keyboard TTS operating unit when the distributor stops, when the tape is exhausted or when the slug delivery galley is full. The various parts are identified as follows:

A—*6 v. machinist's bench lights for three machine hook-up (from left to right, red, green and white respectively)*

B—*6 v. machine lights, for three machine hook-up (from left to right, red, green and white respectively)*

C—*4 to 40 v., a.c. Buzzers*

D—*Distributor Microswitch*

E—*Feed lever Microswitch*

F—*Contact points for tape completion*

G—*Tape completion, slug galley and distributor solenoid*

H—*110 v. line*

J—*25 v. Transformer*

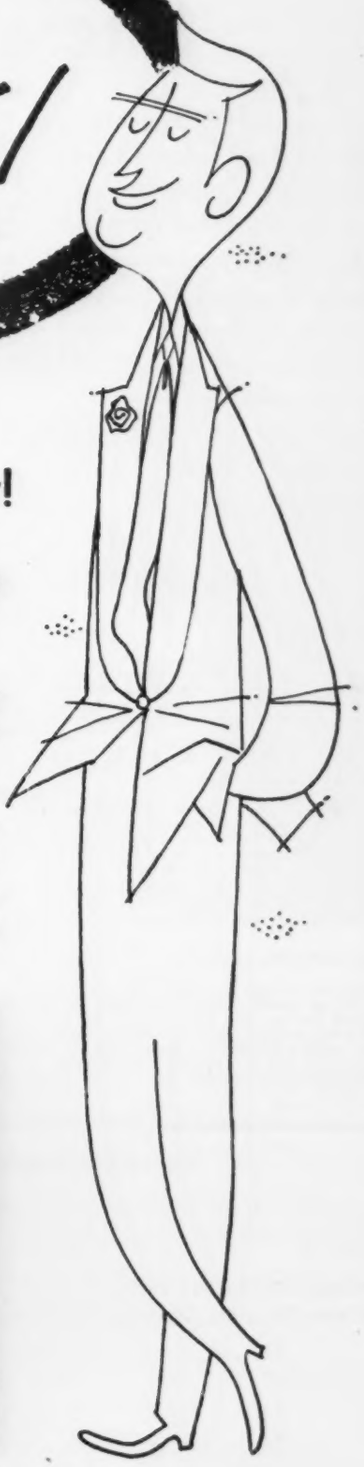
K—*Contact Points for slug galley*

Keyboard Unit is Stopped

Construction of the slug galley stop (Fig. 3) for the automatic keyboard operating unit is as follows: A bracket was fashioned on which was mounted a small insulated copper screw. This bracket in turn is mounted on the galley bracket, l.h., directly in line with positioning hole in the galley. A large hole (5/8 in.) was drilled in the galley. This is so that the insulated screw may extend above the galley itself. Next, a wire was brought directly from the insulated screw on the Teletypesetter unit to the insulated screw on the galley bracket, l.h. From the screw opposite the spring detent, a wire with a spade tongue terminal secured to it was brought to the galley bracket, l.h. and fastened securely to the bracket itself. Both wires were insulated with varnished tubing to give them protection from hot metal in case of a front squirt and molten metal is splashed on the plastic insulating material. The bracket holding the contact point has been slotted to permit moving the insulated screw upward or downward. Next the contact point was positioned so that it extended approx. 0.003 in. inside the galley. The galley slide will miss the insulated screw completely. Now, the instant a slug touches the contact point, contact is made and the solenoid operates to shut off the Teletypesetter operating unit. The tender moves the slugs to the bottom of the galley, thereby breaking contact, opening the solenoid and the unit begins to operate. All this is automatic. The machine will cast approx. 62 picas of type before it shuts off automatically.

The same solenoid operates when the distributor stops, when the tape is exhausted, or when the slug delivery galley is full. The slug galley contact points will not operate unless the Teletypesetter keyboard operating unit is turned on, thereby closing the microswitch.

cool and constant!



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Graphic Arts Equipment and Supplies

Literature for the Asking

Keep Yourself Informed. The folders and bulletins listed below all pertain to modern equipment, supplies, processes and/or methods. These have been prepared especially for plant managers, superintendents and foremen. Please ask for the pieces selected by number and send your request to Literature Dept., *Printing Equipment Engineer*, 1276 West Third St., Cleveland 13, Ohio.

Composing Room

NO. 23 PROOF PRESS

Through illustrations plus descriptive matter, Vandercook & Sons, Inc., provide information concerning that company's No. 23 Safe Electric Galley Proof Press. Bed size is 15 in. by 26 in. Powered by ½ h.p. motor. Press is provided with clutch and braking unit. For a copy please mention PEE No. 268L in your request.

LINECASTING MACHINE PARTS

A group of four bulletins may be obtained from Intertype Corporation which are descriptive of various parts for Intertype linecasting machines. They include an improved knife wiper, forked lever, gas burner and V-belt motor drive. Each bulletin contains an illustration of the part as well as its features. Each of the bulletins is printed in two colors and measures 3⅝ in. by 6¼ in. Please mention PEE No. 269L when requesting copies.

WOOD TYPE SPECIMEN BOOK

Forty pages of specimen lines of wood type make up a two-color, letterhead size booklet prepared by Hamilton Mfg. Co. The popular Hamilton wood type faces are shown in alphabetical order. Specimen pages also include tables which provide width measurements, in points, of all characters in each font in sizes up to ten lines. Please mention PEE No. 270L when requesting a copy.

LUDLOW TIME RECORDS

Results of estimating time required to compose given copy by the Ludlow method and by single letter composition are included in Ludlow Typograph Co.'s booklet, *Ludlow Time Records.* Examples of the work done and the comparable times required to compose it are given. Please mention PEE No. 271L when requesting a copy.

SUPPLIES AND TYPE

American Wood Type Mfg. Co. recently announced the illustrated 1955-1956 Catalog of Printers Supplies, Foundry and Wood Type, and Machinery. This 256 page catalog, issued annually, is 6¾ in. by 10 in. and contains hundreds of illustrations showing wood and metal types; display department, printing and offset supplies; and bindery and composing room equipment and machinery. For a copy, please mention PEE No. 286L in your request.

Platemaking

ROUSE BANDSAWS

Two models of Rouse Bandsaws are illustrated and described in a four page 8½ in. by 11 in. bulletin, issued by H. B. Rouse & Co. Action of the machines is fully described. For a copy, please mention PEE No. 272L in your request.

REPRINT OF ADDRESS

This four page illustrated bulletin consists of a reprint of address delivered by Vice Pres. I. Tornberg, Wood Newspaper Machinery Corp., before ANPA Newspaper Mechanical Conference, Atlantic City, June 1954, regarding Wood's new Heavy Duty Pont Autoplate Stereotype Platecasting Machine. For a copy please mention PEE No. 273L in your request.

ACHIEVEMENT RECORD

A four page folder sponsored by Atlantic Zinc Works and Rolled Plate Metal Co. contains a history of developments and products first offered to photoengravers by the two companies. Among the products mentioned are Zomag, Backote and A-Z Electric Alloy. For a copy of the folder, please mention PEE No. 274L in your request.

d.i-OFFSET PLATE

The d.i-Offset Corp. has compiled a 20 page booklet explaining its direct image offset plate process which enables the user to transfer a locked letterpress form of type and photoengravings directly onto an aluminum foil faced offset plate, thereby combining letterpress and offset printing methods. The booklet is well illustrated and descriptions are simple. For a copy, please mention PEE No. 290L in your request.

Pressroom

MIEHLE ROTARY PRESSES

Both single and multicolor sheet-fed rotary letterpresses are available from Miehle Printing Press & Mfg. Co. in its Models 61 and 76. A descriptive bulletin on these presses has been prepared by Miehle. It includes applications of the presses, improvements and features, an explanation of the unit construction and specifications. The bulletin is printed in two colors and measures 8½ in. by 11 in. Please mention PEE No. 275L when requesting a copy.

ROLL TO ROLL PRESS

A description of the Model C3C-RTR roll to roll Speed-Flex press is contained in a two page bulletin issued by Orville Dutro & Son, Inc. Operations performed on the press and general specifications are listed. The letterhead size bulletin is printed in two colors. Please mention PEE No. 276L when requesting a copy.

COLOR PRESENTATION

A de luxe presentation in which is demonstrated what kinds of color work can be done on C. B. Cottrell & Sons Co. presses in the plant of The Libbie Printing Co. The presentation consists of 20 pages, all in color, size 12 in. by 15 in. A number of examples of color process work indicate the quality of work done for nationally known manufacturers. Please mention PEE No. 277L when requesting a copy.

ROTOGRAVURE PRESSES

A 20 page, two color booklet has been prepared by Halley Rotopress Corp. in which is described Halley's rotogravure presses and auxiliary equipment. In an introduction, the definition and background of the gravure method of printing is given along with advantages and applications. Various diagrams and illustrations of available equipment and combinations with inline units are given. Explanations are included of the feed unit, printing unit, register, impression control, drying and cooling and delivery units. For a copy, please mention PEE No. 278L in your request.

STEEL RULE DIES

J. A. Richards Co. has issued a 19 in. by 25 in. stock design sheet, to display 83 various stock patterns of its tempered steel rule dies. Also on the sheet are simple make-ready instructions and the various names of the dies. For a copy, please mention PEE No. 279L in your request.

PORTFOLIO ON COLLOTYPE

Black Box Collotype Studios are offering a loose-folder type portfolio of printed material on the uses and advantages of collotype printing (photogelatin process). The portfolio contains samples of collotype printing such as in transparencies for back-lighted displays, in posters, wall charts, broadsides, and catalogs. Please mention PEE No. 280L when requesting a copy.

DIRECT IMAGE PRESS

Hess & Barker have released an eight page illustrated folder in which is described the new offset press especially designed for the direct image offset process. In the folder is a route map leading to ANPA Research Institute, Easton, Pa., where the press is now operating. In the direct image offset process, type, cuts and materials are utilized in a relief form which is proved on aluminum foil stock. After conditioning, this becomes the printing plate on the offset press. Speeds up to 10,000 i.p.h. are claimed. For a copy, please mention PEE No. 291L in your request.

PACKAGING ADHESIVES

Paisley Products, Inc. released a four page illustrated folder in which is described six classifications of adhesives

(*Continued on Page 134*)

Literature Request Coupon

After you have selected the literature described in these pages which you would like to have sent to you, please jot down the identification numbers on this coupon and mail to

PRINTING EQUIPMENT *Engineer*
1276 West Third St., Cleveland 13, Ohio

Literature Number(s) _____

_____

Your Name and Title _____

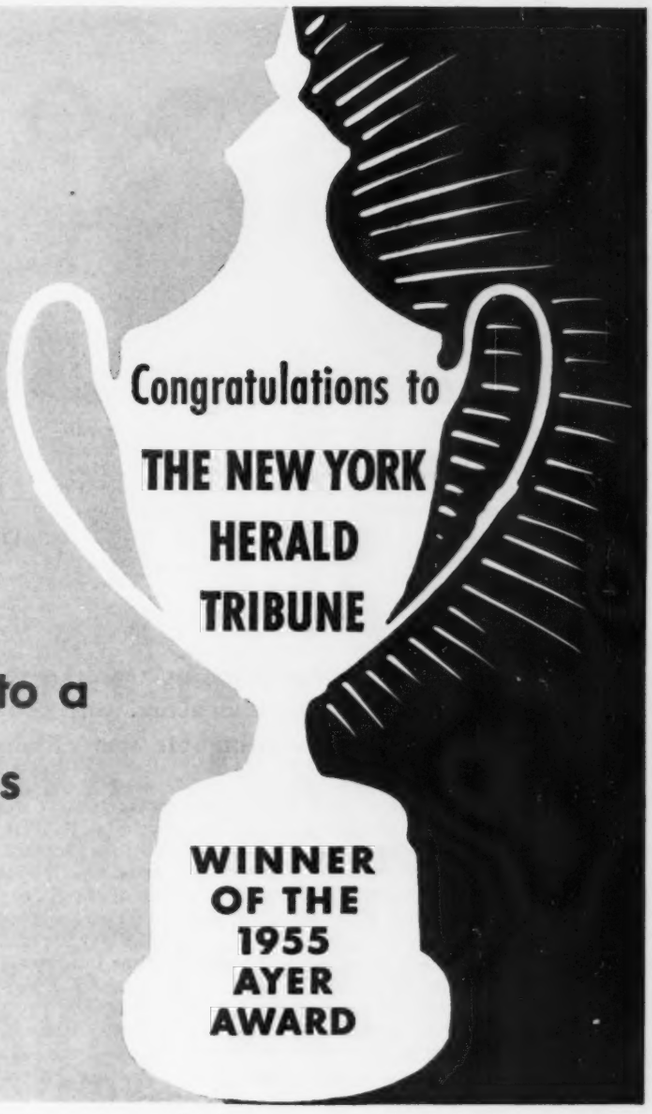
Company Name _____

Street Address _____

City _____ Zone _____ State _____

for
the
SEVENTH
consecutive
year...

the AYER Cup goes to a Newspaper that uses BURGESS MATS



BURGESS CELLULOSE COMPANY congratulates The New York Herald Tribune in winning permanent possession of the F. Wayland Ayer Cup. For the second straight year (and the ninth time) the Herald Tribune has won the award from a field of outstanding entries. We are indeed proud that this year's winner—and so many leading newspapers large and small—depend on Burgess Mats.

Among the Honorable Mentions this year were other users of Burgess Mats—The New York Times, The Iron Mountain (Mich.) News, The Marion (Ohio) Star, and The Daily Pantagraph (Bloomington-Normal, Ill.). Our congratulations also go to these daily newspapers for their contribution to better journalism.

BURGESS CELLULOSE COMPANY

Manufacturers and Distributors of Burgess Chrome and Supreme Tone-Tex Mats

FREEPORT, ILLINOIS

A Laboratory Product
BURGESS Chrome MATS

Committee Women—Chairmen and vice chairmen of the various committees handling the ladies' program for the 1955 Craftsmen's Convention that will be held in the Netherland Plaza Hotel, Cincinnati, August 7-10, 1955, are shown above. Standing left to right are Mesdames: Kenneth Cramer, Lee Augustine, Howard Keefe, Irwin Goller, George Vitt, Carl Aneshansel, Edward Geckle, Robert Wolf, John Kreimer, Kenneth Hueck. Seated are Mesdames: Rober Coy, August Blankenmeyer, H. Eugene Cramer, vice general chairman; A. Elmore Price; Robert Wortman, general chairman.

"Tired Dogs"

Due to standing at work—greater cause of fatigue than actual work done by ad assembler—Swingable seat eliminates problem

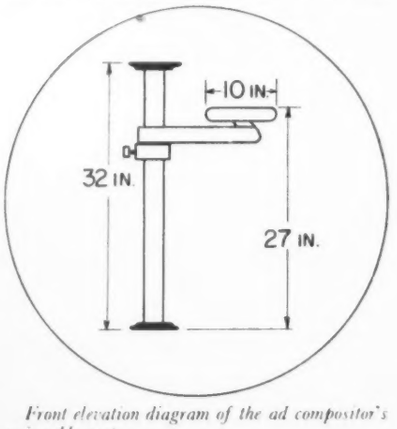
IT IS generally agreed in industry that a worker who is able to sit down at his job does his work easier, better and faster than when he must remain standing on his feet. The LaSalle (Ill.) *Daily News-Tribune* applied this principle to the assembling of ads by its floormen. A special swinging seat was designed and attached to one of the ad frames. With this seat the worker may sit or stand, as he chooses. The seat may be swung under the ad frame when not in use.

The test seat worked out so well and the compositors liked it so much that the newspaper immediately made similar seats for all of its floor workers.

After three months of use, the men were asked how they liked the new seats. Typical of the replies was this one by Stanley Selasek: "We think the seats are wonderful. We are not able to sit down all of the time but they give us a chance to take a load off of our feet whenever we get tired."

Composing Room Supt. John Barron, who designed the swinging seat says: "I have been working on the floor for many years and I know how tired legs and feet become after a whole shift of standing before a frame. We asked opinions of many people in the trade about the possibility of using seats, but nearly everyone told us they would not work out in practice because a floorman's job required that he do so much moving around the shop to type racks, saws and Ludlow.

"While this was certainly true years ago, present day newspaper plants operate differently. All of our ad type is now set on machines and sawed at the machine to measure. In our plant, most Ludlow lines, too, are set in advance and placed with the Linotype material. The modern ad frames are so designed that all of the spacing material is at the compositor's fingertips. For these reasons, there is little necessity for leaving the ad frame for most ads. Use of the seats in our plant seems to bear this out. I am certain now that much of the fatigue comes from standing before a frame rather than from actual labor of assembling type with the hands. I am also convinced that standing still is more tiring on the legs than moving around."



Front elevation diagram of the ad compositor's swingable seat.

The swinging fixtures are made from 1¼ in. steel pipe and a 10 in. round wooden seat mounted 27 in. from the floor. Because of the location of the seat in the center of the ad frame, it is equally convenient either for setting ads in galleys on the bank or for setting full page ads directly on the trucks.

In the ad alley of the LaSalle (Ill.) *Daily News-Tribune*, John N. Barron, composing room superintendent, designed a swingable seat by means of which the compositor may do his work in either standing or sitting position. Note that the leads and slugs cut to size are within easy reach.

When material for a large advertisement is being assembled, the form truck is trundled right up to the worker's ad cabinet. Ads may be composed or corrected easily and efficiently from sitting position. Practically all materials for ad assembly including Ludlow lines are precut before delivery to the ad man.

SURE, WE'RE GROWING

2 NEW INK PLANTS THIS YEAR

BAYTOWN, TEXAS
HUBER, GEORGIA

HUBER

TO GIVE YOU THE BEST IN SERVICE,
WHEREVER YOU ARE...

J. M. HUBER CORPORATION • INK DIVISION

Hillside and Bayonne, New Jersey
Chicago (McCook) and East St. Louis, Illinois
Borger and Baytown, Texas
Boston, Massachusetts
St. Louis, Missouri
Huber, Georgia

Since 1780

Gas Main Breaks— What's To Be Done To Publish Paper?

By VERN WILLIAMS*

**Mechanical Supt., Topeka (Kan.)* State Journal.

AT about 2:20 o'clock one afternoon in February, we found that the metal in all our gas-heated typesetting machines was getting cold and machines were going out of service. This was caused by a severe break in a 16 in. gas main feeding the city of Topeka and several smaller surrounding towns. These towns were without gas supply and might conceivably be for a period up to 48 hrs.

This was just an hour or so before the start of our night shift. Twelve of 19 linecasting machines, the stereotype plate pot, job pot, remelting furnace and four rule casting machines were down. We were practically stopped with an immediate 24 page paper to produce, 22 the following day and 36 pages the following night.

Our first immediate thought was to enlist outside aid to cast our stereotype plates. We contacted William Bailey, editor, and Lowell Baird, mechanical superintendent of the *Daily Kansas*, Kansas City, Kan. They agreed to stand by for whatever assistance could be rendered.

We then contacted the local Skelgas company to see if sufficient bottled gas could be hooked up to run our two Kemp pots, one of 10,000 lb. and one of 7000 lb. capacity, as well as the linecasting machines. Skelgas agreed to try, providing we could get clearance for the hookup from the state fire marshall and the chief of the Topeka fire department. After considerable delay due to jammed phone lines we got clearance to install tanks on the roof and run copper tubing lines to our pots.

We tackled first the stereotype problem and installed two three-tank series of Skelgas with an automatic cut-in valve to cut in the second set of tanks when the gas in the first set was depleted.

In the meantime we had been able to maintain sufficient temperature in the plate pot to get out an abbreviated first edition of 10 pages before the pot froze. This enabled us to make our first edition mails. By 8 p.m. the gas men and plumbers were on the job. We cut a copper feed line into our regular gas feed line to one of our turbo compressors. We reduced the Skelgas pressure to 8 in. water pressure just ahead of the first diaphragm governor, opened up the proportioning valve to double the amount of air intake, started the test burner and within a few minutes had a beautiful flame in the plate pot. This was 9 p.m., at which time we released the Kansas City men from their vigil. With tremendously reduced typesetting capacity we proceeded to make the full 24 pages on schedule for the second and final editions on time without missing a mail. All this with near blizzard conditions outside.

After the stereotype situation was well in hand we set four tanks of Skelgas in series and tied them with copper tubing into a feed line to the linecasting and stripcasting machines. We cut the pressure to the minimum that the regulator would permit. We then pulled all the burners, soldered up the orifices and redrilled with a No. 68 drill, and by 11 p.m. had the first of the linecasting machines back in service. The rest of them were returned to service as rapidly as they could be worked over.

We operated on this basis for the two shifts on Thursday. Thursday afternoon, just 24 hours after we first felt the crippling effect, we were notified that our gas supply was restored. We came in at the close of the Thursday night shift and reconverted the entire plant to natural gas and were ready for normal operation before the time for the day shift to report to work on Friday.

No doubt there are many composing machines operating regularly on bottled gas, but we thought the details of a fast emergency conversion in a large plant not equipped for this type of operation might be of value to others if they were ever faced with such an emergency.

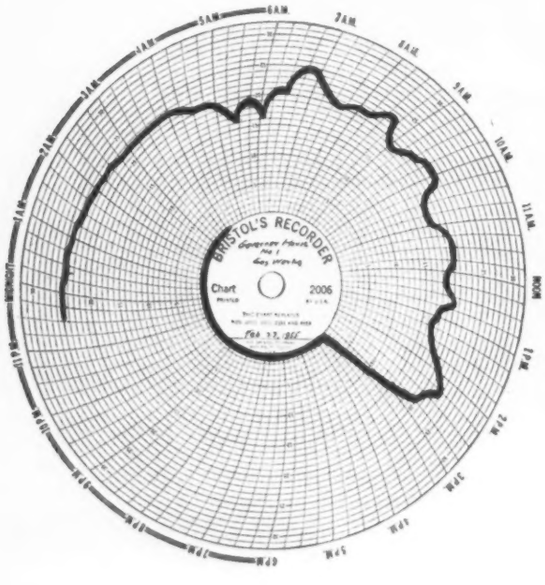
For a No. 3 turbo-compressor operation, using 300 cu. ft. of natural gas per hr., use either enough bottles of high pressure gas, butane, propane, etc., hooked into a common header to equal 300 cu. ft. of natural gas per hr. In our case we found three bottles sufficient, regulated to not more than 8 in. water pressure and discharged into the gas line ahead of the 1 in. inlet regulator. In our case, with the reproportioning valve set for natural gas at 87, we increased the air intake with a reading of 48 on the proportioning valve to secure the desired flame.

We were fortunate to have received from Paul Genn, Genn & Logan, Chicago representatives of C. M. Kemp Co., the above information some years ago as to procedures in just such an emergency. This information was of tremendous help to the Skelgas people as it was the largest installation the local men had ever dealt with, and it enabled them to give us a speedy hookup.

EDITOR'S NOTE:

In the accompanying article, Mechanical Supt. Vern Williams relates how the Topeka (Kan.) State Journal *employed emergency measures to cast type and plates when the gas supply line broke. Williams' account is being published for reference purposes so that if other executives throughout the country should be faced with the same problem they will be better able to cope with it.*

GBC's Haughty Marietta—Haughty Marietta's first year with Chicago's General Binding Corp., where she is regarded as a model test subject, is observed with a birthday cake presented by Ralph Steiner, vice president for production. The manikin operates GBC's electric power punching equipment for performance tests. The machine is used for binding books in loose leaf plastic.



What a Sinking Feeling—*This is a miniature reproduction of the recording chart in the main shops of the Gas Service Co., Topeka, Kan., showing how gas pressure is maintained. The sharp drop in pressure when the supply line near Lawrence, Kan., broke is clearly visible at about 2:20 p.m., Wednesday, February 23. The chart is read by starting at midnight at left and continuing clockwise.* Printing Equipment Engineer *is indebted to Mechanical Supt. Vern Williams of the Topeka (Kans.)* State Journal *for the copy of the chart.*

VULCAN BLANKETS

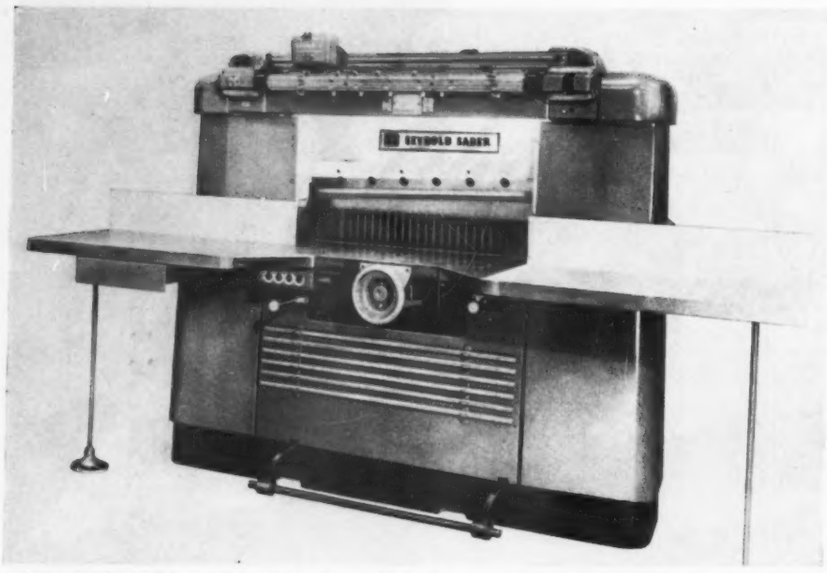
& R.O.P. Color

Through the years Vulcan newspaper blankets have been preferred by pressmen for one big reason: "They do the job best." Better printing and longer mileage are recognized qualities of Vulcan. Now, as R. O. P. color grows more important in printing newspapers, pressmen who know put their confidence in the blanket that handles the most difficult color as well as black and white—Vulcan.

VULCAN RUBBER PRODUCTS, INC.

Specify **VULCAN**—*and be sure!*

VULCAN RUBBER PRODUCTS, INC. • *Subsidiary of Reeves Brothers, Inc.* • 54 Worth Street, New York 13, New York



New Seybold Line—The Saber line of power paper cutters is available in nine models of three sizes (41 in., 47 in., and 54 in.) says Harris-Seybold Co. In addition to the modern lines of the cutter illustrated above, the unit is finished in two-tone blue and gray. It was designed by the Seybold Division engineering staff and will be manufactured in the company's Dayton, (O.) plant.

Max. Interchangeability Featured in Seybold Cutters

INCORPORATED into Harris-Seybold Co.'s new Saber line of power paper cutters is a feature already used in the mass production industries—maximum interchangeability.

Any unit in the entire Saber line of nine models, in sizes of 41 in., 47 in., or 54 in., can be adapted to the changing needs of its printing plant owner. "For the first time, a printing plant management can buy the type of cutter it needs now, and transform it into a more versatile machine at a later date. These major transitions can be made right in the printing plant," says Ren R. Perry, Harris-Seybold vice president-sales.

"This is how it works," continued Perry. "You start with a basic manual back gauge Saber cutter, a 41 in., 47 in. or a 54 in., for example. As your business expands, you convert it to a power back gauge machine and later to an autospacer. Also you can add optional equipment to any of the Saber models as you need it."

Each model of the Seybold Saber line will be equipped with Harris-Seybold's Cushion-Contact clamp. This hydraulic clamp first cushions the pile, allowing time for the air to settle out, and then clamps it evenly and rigidly without disturbing or marking the pile, says the manufacturer. Uniform pressure is maintained during the entire cutting stroke because of a method of applying power to a standard commercial hydraulic pump, with minimum electrical costs.

There is also improved Customer's Cut knife stroke, in which power is applied to the knife bar ahead of the knife edge and in the same line and direction as the knife travels.

Other features of the Saber line include Micromatic Quick Set indexing six-sided spacer bar; the safety Master one-motion two-hand throw-in; the Safety Master instant-response electromagnetic clutch-brake that will stop the cutter knife at any point in the cycle; and an enlarged clamp opening to permit handling higher lifts of stock. For further information, please mention PEE No. 494 in your request.

Celebrates Anniversary

Econo Products, Inc., Rochester, N. Y., pioneer promoter of the use of rubber plates for the printing industry, observed the 25th anniversary of its founding at a dinner meeting held in Rochester, April 28. Selden E. May, founder and president of Econo Products, accepted a plaque awarded by The B. F. Goodrich Company Industrial Products Div., Akron, O., in recognition of 25 years of cordial business relations between the two firms. Clyde O. DeLong, president of BFG's Industrial Products Div., presented the plaque for B. F. Goodrich.

May recalled his company's inauspicious beginnings in 1930 when he began with an idea and little else: "I am one of the few men in the United States who ever went into business without a market."

Birth of flexography—the process of letterpress printing from rubber plates—may be credited to a substantial degree to the refinements made by Econo.

Good flexographic printing is a precise process. Plate tolerances should not exceed plus or minus 0.001 in. Positive controls developed by Econo technicians in the phenolic-impregnated Plastiply matrix material, and in the plate, make such precision routine.

Although no patents were filed, it is generally conceded in the printing industry that May is responsible for such important developments in connection with rubber plates as the following: Method of controlling shrinkage in the plate with spring brass; method of control in phenolic-impregnated mats; method of making successful oil-resisting plates; method of using adhesive fabric to fasten the rubber plate onto the cylinder of the press.

Some 85% of the business forms in the United States are printed on rubber plates, as are most bags—whether burlap, fabric or paper. More than 50% of the films, foils and papers made by the paper industry; virtually all corrugated boxes, and a good share of many other items such as wrapping papers, pencils, speedometers, milk cartons, stationery, radio dials; and metal, plastic advertising novelties are printed on molded rubber printing plates. Books, too, are printed on this medium. The most famous: Ernest Hemingway's *For Whom the Bell Tolls*.

Passes 25th Anniversary—Econo Products founder and president, Selden E. May (left), smilingly accepts a plaque in recognition of 25 years of cordial business relations with B. F. Goodrich Company. Clyde O. DeLong (right), president of BFG's Industrial Products Division, made the presentation. The award took place at Econo Products' 25th anniversary meeting, April 28, 1955.

Why Customers Quit

The April 25th issue of the *Graphic Arts Bulletin*, official publication for the Printing Industry of Oklahoma, Inc., reported that at a recent Oklahoma City printers' meeting a speaker referred to a national survey which showed only 9% of the customers are lost because of price cutting. This survey showed that discourteous treatment, poor service or indifference accounted for 68%, and another 14% was lost because of unadjusted grievances. Price cutting or buying for less accounted for 9%. Another 3% of the loss was caused by distant moves. It should always be kept in mind that one old customer is worth two new ones. Your old customer requires no selling, no credit investigation or extra bookkeeping. He is familiar with your shop and your class of work. A competitor cannot easily take him from you because his buying habits are already established. Don't let "neglect" lose customers for you.

Many of our readers will respond to your Want Ads in the Classified Section of *Printing Equipment Engineer*.

A HIT in New York!

Now See It in Chicago---

A NEW, FASTER ENGRAVING PROCESS

for

LINE WORK, HALF-TONE or COMBINATION PLATES

On Display at ANPA Mechanical Conference, Edgewater Beach Hotel, June 6 to 8

ACME one bite ETCHER

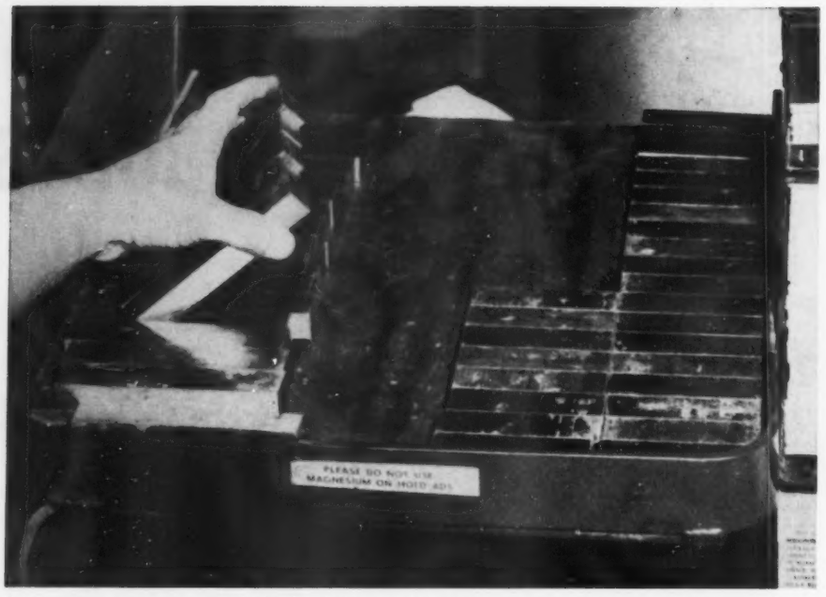
ACME Z·M ZINC·MAGNESIUM PLATE

- **ELIMINATES POWDERING**
- **SAVES TIME**
- **INCREASES PRODUCTION**

HERE'S a winning combination . . . a **patented bi-metal plate** incorporating the advantages of both zinc and magnesium . . . and a **new engraving machine** which will etch that plate to virtually any desired depth in one simple operation Ready now after years of research.

Write or Wire for Full Information

ACME TELECTRONIX Division of NEA Service, Inc.
1200 West Third Street Cleveland 13, Ohio



In the composing room of the La Salle (Ill.) *Daily News-Tribune*, which is a 9 col. paper, magnesium base is provided in two sizes (6 picas by 22 picas and 6 picas by 33 picas) for basing stereotype shell casts with two-side Scotch tape. Each ad assembler is provided a tray near his worktop for holding a quantity of each width.

Magnesium Base In 9 Col. Paper Cut to Unit Size

THE LaSalle (Ill.) *News-Tribune* was confronted with making form material changes when it switched from a 12 pica column width (8 col. per page) to 11½ picas with the addition of a ninth column to its page. The cast iron base previously used for mounting stereo shell casts and electros or plastic plates would have lost its supporting edges on two sides if it had been machined to fit the narrower column. The 1 col. iron base, however, was converted because practically no support was lost when 3 pts. were machined off each side, but too much support was lost from bases more than 1 col. wide.

Composing Room Supt. John Barron investigated basing materials. He put the problem up to Dow Chemical Co. That firm suggested rough magnesium plate, machined and cut to size, might do the trick.

A foundry supplier (Freeman Supply Co.) sold the *News-Tribune* four rough slabs 1 in. thick and about 19 in. width by 24 in. length. These plates (5% zinc alloy) were taken to a local machine shop and milled down to 0.759 in. These were then sawed down on the *News-Tribune's* saw-trimmers fitted with tungsten carbide-toothed saw blades. Bases were cut to inside border measurements for 2 and 3 col. ad widths. Cost per slab of magnesium was about $40. Machining cost was $140. Total cost, $300.

The inside measure of the magnesium strips were cut to 22 picas and 33 picas and both sizes to a uniform depth of 6 picas. These pieces could be used to make up any size ad from 2 col. to 9 col. With the new and narrower column widths there was room for a 6 pt. border if one was called for in the layout, and if not, leads and slugs could be inserted to fill out the space.

Bases were used on so many ads that there was not enough to be used on all of the ads. It was decided to paint the pieces of magnesium base with ANPA red Ad-Mark and have them used only on one-time ads to avoid metal tie-up. The red color helps identify the strips anywhere in the shop. Thus in breaking up forms the pieces are not tossed into the melting pot. They are transferred to the floorman's worktops at each of which small special racks have been provided.

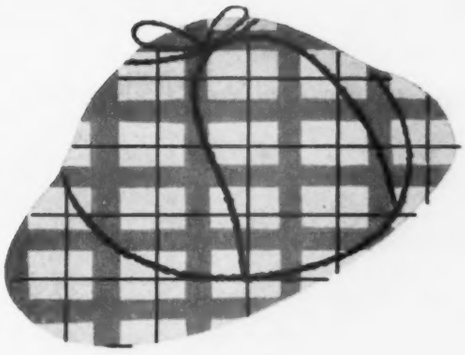
Dust and/or chips resulting from cutting the magnesium slabs to size are considered to be highly inflammable. To dispose of them, a pit was dug outside the building and the shavings were placed in it and burned. A solid piece occasionally gets into the melting pot, but is not damaged. It floats on top where it can be picked off. Superintendent Barron and the floormen agree there is no danger from fire in its solid form. The ignition point is high.

LITTLE BLACK BOOK

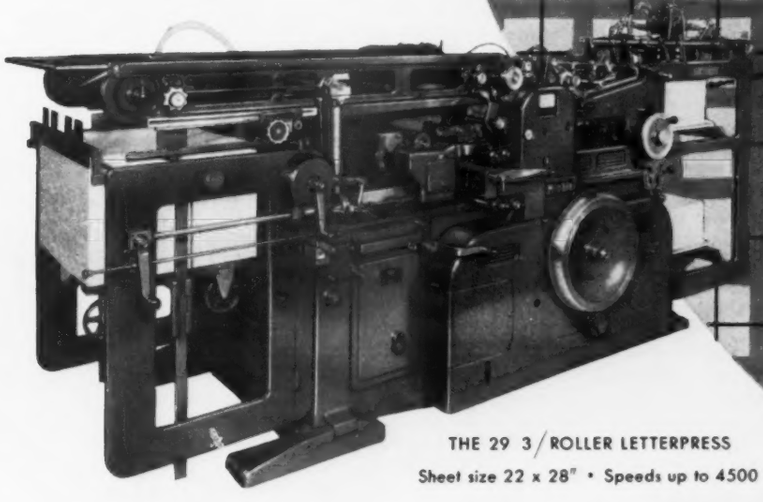
A different kind of little black book will be available for use by visiting Craftsmen at the 36th Annual Craftsmen's Convention to be held at the Netherland Plaza Hotel in Cincinnati, August 7-10. H. Eugene Cramer, chairman of the Plant Visitation Committee is preparing the black book. Cramer has established contacts with the various plants in the different branches of the Graphic Arts industry in Cincinnati. These plants will be catalogued under their particular type of work. When a visiting Craftsman says he would like to visit a plant or plants doing a particular kind of work, Gene Cramer will get out his little black book and make arrangements for the visit.

G.B.W. Announcement — William Recht, president of Gaetjens, Berger & Wirth, Inc., recently announced that Adolph Engel has joined the G.B.W. sales organization. Engel was formerly vice president of the Charles Hellmuth Printing Ink Corp., having served there for 38 yrs.

Presentations at Carnegie—The Alumni Seminar at Carnegie Tech's School of Printing Management on May 6, announced awards and honors for three students and one professor. The Alumni presented Homer Sterling, professor in the School of Printing Management, with a plaque for his years of faithful and meritorious service to Carnegie printers and the Graphic Arts. A member of the Carnegie faculty since 1926, Sterling was appointed chairman of the Printing Management faculty in 1950. William Harvey Mowry, a printing management sophomore from Bedford, Pa., was presented the $100 Bruce Rogers Scholarship for outstanding student, sponsored by the American Institute of Graphic Arts. The Reinhold-Gould Award, sponsored by H. E. Gould, president of the company, was granted to Charles Whitney Brown, a graduate student from Memphis, Tenn. The $100 award is given yearly to an outstanding graduate student in Printing Management with high scholastic standing during his first three semesters of study. The Fred Hagen Printing Honor Prize was presented to Stanford Herbert Rosenberg, a senior from Brooklyn, N. Y. Sponsored by the Chicago Club of Printing House Craftsmen in honor of the Club's past president, Fred Hagen, sr., the prize is given to the senior student who has attained the highest scholastic standing during the seven preceding semesters of study. Pictured here are (from left to right): Rosenberg, Mowry, Prof. Sterling, and Brown.



Investigate before you invest!



THE 29 3/ROLLER LETTERPRESS
Sheet size 22 x 28" • Speeds up to 4500

*** 3 ROLLER DISTRIBUTION * SHEET TRANSFER MECHANISM * DEXTER STREAM FEEDING**

Investigate these and the many other features that make this high-speed automatic letterpress the most profitable press in its size range. Invest in equipment that you know will pay continuing dividends in fine printing over years of constant operation.

The Miehle PRINTING PRESS & MANUFACTURING CO.
Chicago 8, Illinois

The Miehle—Leader among the world's manufacturers of fine printing equipment.

Inertia *in the printing and publishing industry with respect to standardization and research stagnates progress and profits.*

By ROBERT E. ROSSELL*

**Managing Director, Research and Engineering Council, Washington, D. C. Abstract of address delivered before midyear meeting of Book Manufacturers Institute, April 1955.*

IN THE last eight years there has been a continuous decline in the percentage of profits to sales dollars in the printing and publishing industry. In 1946 the average profit was about 6½c on the dollar, but with each succeeding year profit has dwindled almost 50% to a paltry 3½c on the dollar. By 1960 it is conceivable that there will be no profit in the industry. Conceivable, but not probable, because I believe we have reached a turning point.

First, let us see why profits have declined, and then determine what can be done about it. Obviously, since sales have continued to increase in the past few years, the reason for decreasing profits lies entirely in the increase in costs. Typical all-inclusive costs have gone up 159% while production capacity has increased only 10%.

We can cut costs by doing two things: (1) By finding and using production standards that would eliminate inefficient methods and practices; and (2) By bringing about technological improvements through research that will give us more product for less expense. It is the business of the Research and Engineering Council of the Graphic Arts Industry to do these things for you.

Use of Standards

Every industry of importance has standards, and the industry of printing and publishing is among the top 10 of the 20 major groups of manufacturing industries. The automobile industry, the chemical industry, the oil industry, all have standards. Why not the printing and publishing industry?

Available scientific and technical knowledge that has been built up during the years within our industry in laboratories and other industries, particularly in the field of electronics, needs to be translated into practical procedures for use by the printing and publishing industry. Standardization is the best avenue for the translating process, and it can save countless hours of work. But unless the industry is willing to use it, the stumbling-along process of the past will continue, with its resulting inefficiencies and high cost.

Obviously, there must be closer coordination between the publisher and printer in order to bring about more efficient and less costly operations. In this regard, I would like to read to you an excerpt from a speech made by Dwight Monaco, until recently assistant vice president and director of manufacturing, of McGraw-Hill.

"We, at McGraw-Hill, have made exhaustive studies on controls and standards. What has been the result? By means of standard operations on all publications with all printers, we are able to operate our publications on a strictly railroad timetable type of schedule. We make up a forecast three months in advance by consulting with each publication as to the number of pages budgeted for the quarter. This is translated into schedules of forms to be printed in a given printing plant. The schedules are then discussed with the printer, and both approve the final result. From that point on, each and every form (including covers) is closed exactly on the day it is scheduled. By the same token, we expect the book to be completed and mailed on time.

"Because of certain standards of operations we have been able to do much by way of helping to reduce costs at the printer's level . . . It just stands to reason that if you maintain a timetable schedule and the printer can schedule his equipment on the basis of that schedule, his costs are bound to be considerably less than when the operation is one of catch as catch can."

Those words by Monaco certainly show that the publishing house can profit by standards of operation, and there is no reason why the printer would not benefit also by having standards of his own to rely upon. However, the important question is, When are we going to establish national standards for the printing and publishing industry so that the trend toward lower profits can be reversed?

Need for Standards

We must face the fact that there is a great need for standards in our industry. There is a variation in practices among plants across the nation. There is variation of opinion regarding procedures among plants in the same city. And sometimes there is a difference of opinion regarding procedures among men in the same plant.

Fortunately, something is being done about this great need. The Research and Engineering Council of the Graphic Arts

(Continued on Page 112)

BABY SITTERS BUREAU

A Baby Sitters Bureau will be one of the functions of the Ladies Committee of the 36th Annual Craftsmen's Convention to be held at the Netherland Plaza Hotel in Cincinnati, August 7-10. Mrs. Robert R. Wortman, chairman of the Ladies Committee, and Mrs. H. Eugene Cramer, vice chairman, say their committee will recommend qualified baby sitters to visiting Craftsmen parents. Craftsmen and their wives are encouraged to bring their children.

इण्टरटाइप फोटोसैटर मुद्रण Ar

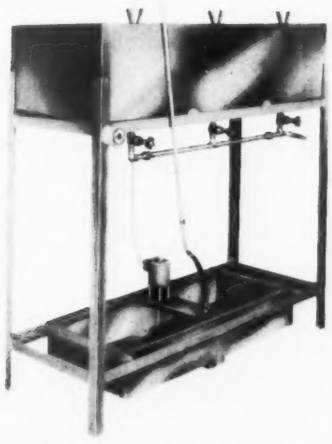
36 POINT FOTOSETTER DEVANAGARI

Fotosetter Handles Script—The Intertype Corporation Fotosetter machine has been adapted to set Devanagari script, one of the most complicated languages in the world. Hari G. Govil, Indian consultant who assisted in the adaptation, is shown seated at the Fotosetter while Herman R. Freund, Intertype vice president-typographic development, stands. Devanagari is a phonetic language translated into written form by a system of characters and accent marks. These can be seen in the type specimen. Even in simplified form, there are 700 to 1000 characters. On the Fotosetter, however, only about 175 Fotomats are used. Accents are superimposed on the basic characters by adjusting the movement of the film on which the characters appear. Lens adjustments can be made to produce type sizes from 6 to 36 point. This phototypesetting method should help alleviate some of India's problems which spring from its lack of a readily printable language. These include a chronic book shortage and 85% illiteracy. Only an estimated 20 million out of 350 million Indians are regular newspaper readers.

The MASTER-DOW ETCHER

FOR RAPID POWDERLESS ETCHING OF MAGNESIUM

Maximum Plate Size 24" x 26"
Approximate floor space 6 ft. x 6 ft.
Vent Hood and Timer available at additional cost



MASTER SWITCH TANKS*
FOR DOW PROCESS

*Enables Halftone, Line, and Deep-Etch baths to be used with one etching machine. Baths not in use can be stored until needed. Switching time from one bath to another approximately 5 minutes.

We also manufacture the following equipment for Dow Process Etching:

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FACE-UP WHIRLERS
STAINLESS STEEL SINKS
DIPPING TANKS
DRIP PANS
BURNING-IN CABINETS

MASTER DOW PROCESS INSTALLATIONS

No. Mach.	
2	THE JOURNAL CO.—*Milwaukee, Wisc.*
1	HOLYOKE DAILY TRANSCRIPT & TELEGRAM—*Holyoke, Mass.*
2	SOUTH BEND TRIBUNE—*South Bend, Ind.*
3	BOSTON HERALD TRAVELLER CORP.—*Boston, Mass.*
2	BULLETIN CO.—*Philadelphia, Pa.*
1	A.N.P.A. LABORATORIES—*Easton, Pa.*
1	WASHINGTON POST TIMES HERALD—*Washington, D. C.*
1	NEW YORK DAILY NEWS—*New York, N. Y.*
1	QUINCY PATRIOT LEDGER—*Quincy, Mass.*
2	INDIANAPOLIS NEWS—*Indianapolis, Ind.*
3	INDUSTRIAL ENGRAVING—*Easton, Pa.*
2	NORTHWESTERN P. E. CO.—*Chicago, Ill.*
1	PONTIAC ENGRAVING & ELEC. CO.—*Chicago, Ill.*
1	MUELLER ENGRAVING CO.—*Milwaukee, Wisc.*
1	AKRON ENGRAVING CO.—*Akron, Ohio*
1	EHRET ENGRAVING CO.—*Denver, Colo.*
1	APEX ENGRAVERS, INC.—*Cleveland, Ohio*
1	NORTHWESTERN ENGRAVING CO.—*Menasha, Wisc.*
1	MERRIMACK ELECTROTYPE CO.—*Concord, N. H.*
1	LAFAYETTE ENGRAVING CO.—*Lafayette, Ind.*
1	PHILLIP HANO CO.—*Holyoke, Mass.*
1	KRUS CO.—*Milwaukee, Wisc.*
1	ILLINOIS PHOTOENGRAVING CO.—*Chicago, Ill.*
1	COCKS CLARK ENGR. CO.—*Denver, Colo.*
1	GOVERNMENT PRINTING OFFICE—*Washington, D. C.*
1	MARLAND PHOTOENGRAVING CO.—*Philadelphia, Pa.*
1	DELAWARE VALLEY P. E. CO.—*Philadelphia, Pa.*
1	DOW CHEMICAL CO.—*Midland, Mich.*
1	OREGON ENGRAVING CO.—*Portland, Oregon*
1	METALLGESELLSCHAFT—*Frankfurt, Germany*
1	QUALITY PARK ENGRAVING—*St. Paul, Minn.*

MASTER ETCHING MACHINE CO., WYNCOTE, PENNA.

"Nice printing service, Pinckny. By the way, what happened to the dot over this 6 pt. 'i'?"

Die Cutting
For Printers

By JOSEPH DeHIPPOLYTIS*

**President, Acme Steel Rule Die Corp., Waterbury, Conn.*

J. DeHippolytis, President, Acme Steel Rule Die Corp.

EVER since the evolution of the steel rule die cutting industry at the Robert Gair Co. in the 1870s, die cutting has been shrouded in a cloak of reticence. Currently, with the natural growth of die cutting in the packaging, display, and allied industries, this keep-it-to-yourself attitude is changing. Information of advantage to die cutters and potential die cutters is finding its way into conversation and into print.

Actually, die cutting is so simple that any printer with minimum ingenuity can do it profitably. In Fig. 1 are shown three typical dies. These dies can be handled readily in presses in printing plants. From top to bottom in Fig. 1, they are: A folding carton die, a label die, and a greeting card die. The printer's equipment and know-how are more than adequate in handling large varieties of work and materials suitable for die cutting. He has the equipment to die cut such items as corrugated, box board, labels, displays, and even—under certain conditions—gasket materials. When working with the latter material, the printer usually will have to consult his diemaker as to pressure required per linial inch of rule.

The cylinder presses, including Miehle, Kelley, Little Giant, Miller, Banthin, can be used for die cutting without alterations to the press. The die cutting jacket shown in Fig. 2 is used for these presses. In many cases these cylinder presses are as good as regular cutters and creasers, and converted cutters and creasers. Die cutting on these presses is as simple as ABC. Just put the die into the bed of the press, put the jacket on the cylinder and makeready the job. Die cutting can then be run as if it were a printing job.

Platen presses, including C&P, Kluge, Heidelberg, Universal, Hartford, Colt, are excellent also for die cutting. It can be done on these presses either hand-fed, or automatically-fed, at the same speed as printing. Jackets and plates are readily available. Again, just put the die into the press, put the jacket or plate on the platen, and makeready the job. It's that easy.

Fig. 1. — Three typical dies for cutting (from top to bottom): A folding carton die, a label die, and a greeting card die.

The printer should strive for an even impression in his makeready. Choice of makeready paper can be made from among tissue, sulphite, or Kraft paper. The writer leans toward the latter as the best medium, feeling that a perfectly even impression is only a goal and not a reality. Kraft paper, as used by all box companies, produces the best practical results.

In the writer's opinion, it is most important to consider all phases before the first operation is started. The layout must be consistent with the printing; the printing must be consistent with the die cutting; the die cutting must be consistent with the stripping. Any reputable diemaker will be glad to confer with the printer before the job is set up. This may save the headaches and problems that arise from lack of knowledge.

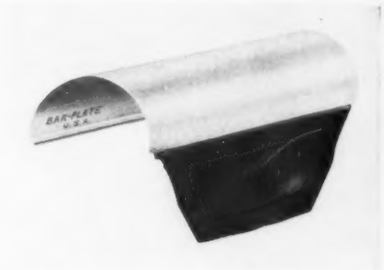
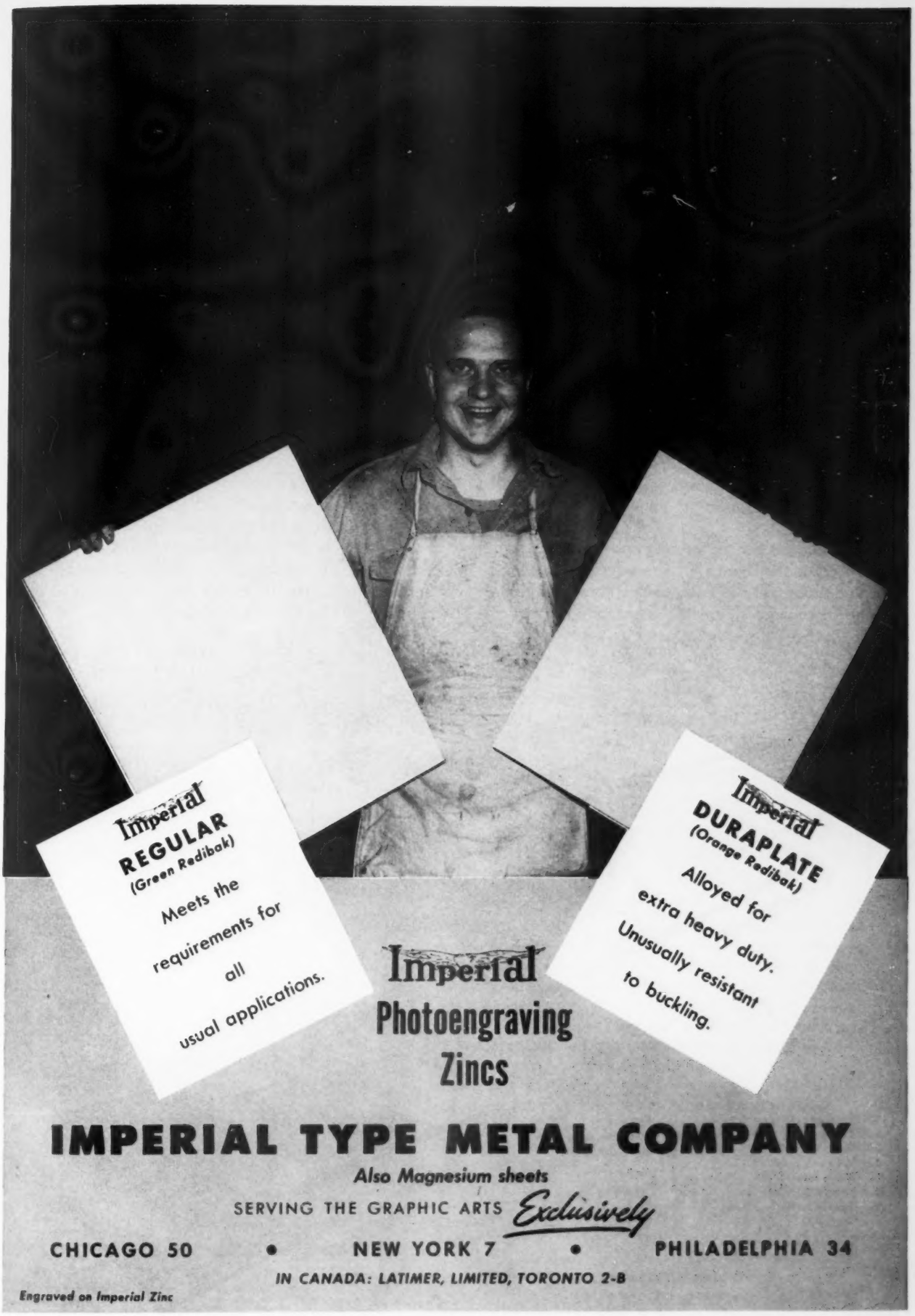


Fig. 2.—A die cutting jacket for mounting on press cylinders. Such jackets are available for both cylinder and platen presses.

Die cutting is one of the most profitable branches of the printing industry, and one that has a good natural growth ahead. It is certainly worthwhile for each printer to consider this industry as a means to give additional service to his customers and perhaps more profit to himself.

EMPLOYEE RELATIONS ITEM

The Corydon M. Johnson Co., Inc., printers, Long Island, N. Y., recently adopted a new management-employee communications technique. Each legal holiday will be announced through a printed four page folder. In its first folder the Johnson management notified its 230 employees the plant would be closed for George Washington's Birthday, February 22. All persons actively employed were paid eight hours for the day. Heretofore, the company simply announced the closing of the plant via a brief memorandum to all employees. Also depicted in the folder are traditional symbols of the national holidays on the cover and there is a review of the events that make the holiday warrant national recognition.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Engraved on Imperial Zinc

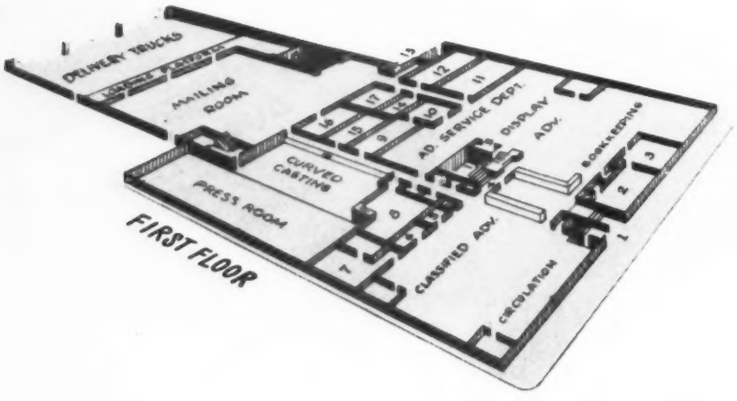
Portsmouth (O.) Times

A two story and basement brick building has been constructed by the Portsmouth (O.) **Times**. Interior dividing walls of the fireproof structure consist of removable prefabricated metal partitions.

Reinforced concrete floors were installed throughout the building. These were covered with asphalt tile in all office areas. Edge grained 2 in. thick creosoted wood block was laid in the mechanical departments. Acoustical ceilings have been installed in all departments and offices. Walls and floors in the lobby entrance are of marble.

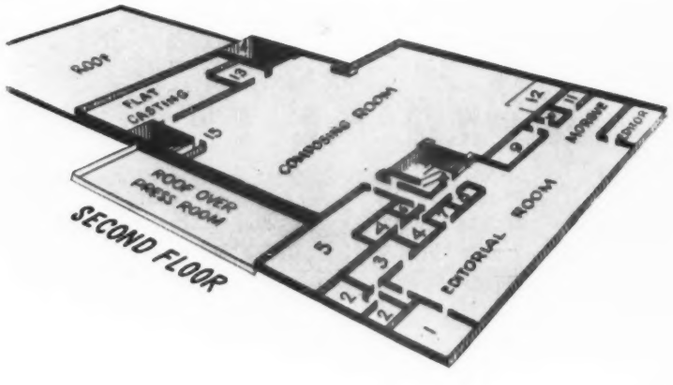
The building is heated by recessed convector radiation. A complete change of filtered air occurs in all occupied areas six times every hour. There is fluorescent lighting throughout. The plant is equipped with a hydraulic freight elevator servicing all floors and a two-cage dumb waiter between the first floor advertising department and the second floor composing room. A pneumatic tube system connects the editorial and composing rooms.

Fire protection is provided by a sprinkler system which is supplemented by chemical fire extinguishers placed in strategic locations. Housed in the basement are the boiler room, paper storage area for accommodating 400 rolls of newsprint, a 3000 gal. ink tank, reel room and miscellaneous storage space. There is a third floor pent house in which are located the fans, blowers, filters, heaters, etc., required for the ventilation system. Other departments in the building are identified in the accompanying plans of the two main floors.



First Floor

1.—Entrance
2 and 3.—Offices
4.—Stairways
5 and 6.—Storage
7.—Women's toilet
8.—Men's toilet
9 through 17.—Storage

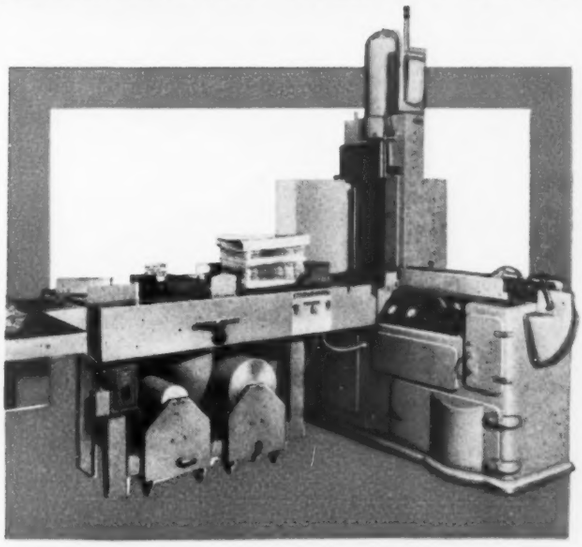


Second Floor

1.—Scanagraver room
2.—Darkrooms
3.—Photo studio
4.—Women's toilet
5.—Men's toilet
6 through 8.—Storage
9.—Teletypesetter punching room
10.—Storage
11.—Microfilm room
12.—Machinist's room
13.—Metal melting
14.—Elevator
15.—Stairways

FLASH!
Toronto Star Announces Appointment of Cline Electric
The Toronto Star Limited announced today that Cline Electric Manufacturing Company of Chicago has been selected as the exclusive sales and service representative in Canada, the United States and abroad for the Star's automatic mail room equipment.
The newly appointed representative is among the world's leading manufacturers and distributors of specialized equipment for newspapers. Since 1912 Cline Electric has supplied more electrical apparatus for printing industry than all others combined, including conveyors and other mail room equipment.
INCREASE S. KOREA ARMY
Seoul, April 15—(Reuters)—South Korea will establish two reserve divisions on May 5, bringing its army strength to 20

Cline offers mail room mechanization with WALLASTAR automatic bundler equipment



Designed by newspaper operators for greater newspaper operating efficiency, the Wallastar Automatic Bundler and Starwrapper provide the greatest advance in mailing room mechanization in many years. The Wallastar and Starwrapper in-line automatic feeding and processing system is the most efficient method of bundle production . . . Wherever installed, this system has been hailed as the greatest money saving advancement in years!
Cline Electric Manufacturing Company is proud to offer this fine equipment to the newspaper industry.

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MODEL G-4

Think of the many sawing operations that must be done on your saw. They include — squaring and notching plates, inside mortising, sawing angles, mitering borders, sawing spacing material, rule and slugs.

That's just like machining parts in a machine shop, they all have to be right in order to fit together.

For accurate and fast lockups get a Hammond Glider TrimOsaw.

"THE SAW WITH THE BALLBEARING TABLE"

Hammond Machinery Builders INC

1604 DOUGLAS AVENUE KALAMAZOO, MICHIGAN

Patents

For The GRAPHIC ARTS

Covering patents issued March 1, 8, 15, 22 and 29.

All new patents for the Graphic Arts are reported exclusively for *Printing Equipment Engineer* by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. *Printing Equipment Engineer* is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforating:

DELIVERY FOR SIGNATURE STITCHING MACHINES

A signature stitching machine of the saddle type ejects stitched assemblies beyond the discharge end of the saddle and automatically transfers them by means of a belt conveyor to a collection station where they can be inspected. Patent 2,703,541 by John W. Miller, assigned to F. F. Rosback Co.

•

Composing Room Equipment:

COMPOSING MACHINE

The patent provides a micrometrically accurate arrangement whereby, in coordination with a typewriter carriage, characters may be selected, aligned and justified for printing or other reproduction. Patent 2,703,715 by Chester A. Macomic, assigned to Patent Development Corp.

AUTOMATIC CONTROL MEANS FOR LINE CASTING MACHINES

The control is responsive to code indications on a punched tape for operating a Linotype or Intertype. The advance of the tape is time relative to the machine operations and advance is prevented while an assembled line is being carried to line casting position. Patent 2,704,595 to Joseph J. Ackell, assigned to Dow Jones & Co., Inc.

CONTROL SYSTEM FOR LINE CASTING MACHINES

For controlling Linotype and Intertype casting machines, a constantly rotating shaft governs the tape advancing and sensing device. This eliminates a slip clutch and a detent and speeds up operations. Patent 2,704,596 by Joseph J. Ackell, assigned to Dow Jones & Co., Inc.

TYPOGRAPHICAL COMPOSING MACHINE

Preferably for use on machines of the high speed class, a pressure-exerting device of the self-locking, self-releasing character is provided to hold the upper end of magazine firmly down upon the base frame when the magazine is in its operative position. Patent 2,703,171 by Thomas L. Nash, assigned to American Viscose Corp.

•

Feeding, Folding, Delivery:

ZIGZAG FOLDING DEVICE AND METHOD

Applicable to existing paper folding machines as well as to new machines during their manufacture, an arrangement is disclosed for pulling portions of a web over edges of folder blades so as to provide slack in the web both in advance of and behind the folder blades. Patent 2,703,238 by Leslie T. Hand, assigned to Morsegraph Incorporated.

PAPER FEEDING MECHANISM

By supporting a stack of sheets in a hollow perforated base container and applying vacuum to inside of hollow container, sheets may be removed one at a time from the bottom of stack and fed to a printing machine. A counter is associated with the feeder. Patent 2,704,209 by John Halahan, Floyd A. Lyon, and Theodore F. Aronson.

•

Platemaking:

FLONG FOR MATRICES

The variation in dimension and distortion of flongs or blanks for matrices for use in stereotyping is controlled by mixing a minor proportion of glass fibers with the cellulose fibers in the original pulp furnish. The glass fibers have the effect of inhibiting the motion of the cellulose fibers. Patent 2,702,927 by Robert A. Travis.

MATRIX FOR PRODUCTION OF PLASTIC PRINTING PLATES

The matrix contains a compressible layer of cellulosic filler, a flexible cohesive layer of cellulosic fibers coating a face of the compressible layer and a continuous film of heat-curable resin coating the face of the flexible layer. This structure is placed upon the face of a type form, heated, pressed and cured to form a plastic plate. Patent 2,703,051 by Henry M. Richardson, assigned to News Syndicate Co., Inc.

AUXILIARY SCREENING APPARATUS AND METHOD FOR MULTICOLOR PHOTOGRAVURE

Auxiliary screening device is used in conjunction with the ordinary square dot halftone screen in making positive plates from color separation negatives. The device is incorporated in the lens of the camera employed in making positives, and is angularly adjustable in accord with various settings of the halftone screen. Patent 2,703,281 by John G. Consaul and Edwin Velten, assigned to Art Color Printing Co.

NONELECTROLYTIC METHOD FOR MAKING BI-METALLIC OFFSET PRINTING COPPER PLATING COMPOSITION AND METHOD OF PLATING

Bi-metallic offset printing plates may be prepared utilizing chemical action for depositing a hard adherent metal film in the image area by a method usable in any printing house. The novel plating composition comprises a copper salt, ammonium hydroxide, a strong reducer and a mutual solvent. Patent 2,703,295 by Morris S. Kantrowitz and Alden E. Yelmgren.

PHOTOCOMPOSING MACHINE WITH LINE REPEAT MECHANISM

The machine is used to produce photographically, on sensitized film or paper, lines of type from composed lines or matrices. The film when developed is suited for use in preparing printing plates of the type utilized in offset and gravure processes. Patent 2,704,014 by Herman R. Freund, assigned to Intertype Corporation.

PHOTOMECHANICAL PROCESSES

This method provides for producing positives directly from originals by a reversal technique. Patent 2,704,252 by Donald Charles Gresham, assigned to McCorquodale and Co., Ltd.

PHOTOGRAPHICALLY SENSITIVE ELEMENT FOR PHOTOMECHANICAL REPRODUCTION

The materials of the invention are useful in new methods of making screen records, for correction of tone in such records and for producing color-corrected screen records. Patent 2,704,254 by Donald Charles Gresham, assigned to McCorquodale & Co., Ltd.

SOLD BY

Western Newspaper Union

E. C. Palmer & Co.

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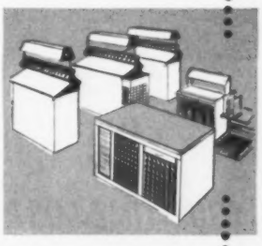
Another boost from Hamilton toward higher Composing Room Profits!



versatile place-for-everything work benches

In a composing room change-over from costly confusion to profitable efficiency, Hamilton machinists' work benches have an importance all their own. There's plenty of handy work area on the 1¾-inch thick, black finished birch tops . . . wood to protect delicate precision machine parts. Ample organized storage — for matrices and molds, valuable machine parts, tools, rags, cleansers — in the various steel drawers, cupboards and bins. Moreover, you can get benches practically custom-built to work needs and space, by choosing your own assemblies of tops, storage units and trays from a wide assortment.

Here's one more boost to profits — an end to waste of time hunting materials, for better and faster work — with outstanding Hamilton equipment. See your Hamilton dealer for full information without obligation.

Also by Hamilton: finest type cabinets, imposing tables, newspaper tables, ad assembly cabinets, galley cabinets, chase racks, trucks, miscellaneous units and accessories of many kinds.

80-inch Work Bench No. 2224

"Customer's choice" assembly of No. 2303 top, No. 2205 cupboard unit with two removable shelves, and two No. 2201 7-drawer units. Each drawer has combination pull and label holder, and a stop to prevent accidental pull-out.

Hamilton PRINTERS EQUIPMENT

HAMILTON MANUFACTURING COMPANY • Two Rivers, Wisconsin

PREPARATION OF PRINTING SURFACES FOR PHOTOGRAPHING

The invention makes possible the direct photographing of printing surfaces so as to obtain photographic negatives and positives which can be used in production of gravure and other printing surfaces by known methods. Patent 2,704,410 by George L. Morrison.

METAL PRINTING PLATE AND METHOD OF PRODUCING SAME

The printing plate of this invention utilizes as the metal base portion a commercial magnesium or magnesium alloy plate. The plate has a thin skin of zinc covering the base. The skin is covered with a non-metallic image-receiving etchant resistant coating. Patent 2,704,512 by William F. Alexander, assigned, by mesne assignments, to Claber Bi-Metal Plate Co., Inc.

PHOTOGRAPHIC COPYING PROCESS

Applicable to production of printing plates, such as are used for offset, the process comprises transferring a line or half-tone image on a first support by contact to a second support after the gelatin comprising the complementary image has been hardened in a tanning developer. Patent 2,704,712 by Anthony Ernest Jackson, assigned by mesne assignments, to Eastman Kodak Co.

PATENT SEARCHES

For Patent Research in the U.S. Patent Office, or a prompt estimate on any type of search, write

INVENTION, INC.
Munsey Bldg. Washington, D.C.

MAKING READY STEREOTYPE MATRIX

Made-ready stereotype matrices suitable for use in production of printing plates and having make-ready permanently adherent on the back of the matrix so that its permanent register is assured are produced by use of the composite underlay material of the invention. Patent 2,704,977 by Frank E. Reilly, assigned to Electrographic Corporation.

METHOD OF DEVELOPING AN ELECTROSTATIC LATENT IMAGE

Flat, xerographic plates, particularly those of several feet in length, are developed by discharging a developing material onto the plate from a travelling hopper while the plate is supported in an inclined position of about 30 deg. Patent 2,705,199 by Harold E. Clark.

•

Printing Presses:

MOUNTING OF THE LARGE GEAR CAM FOLLOWER IN PIVOTED PLATEN TYPE OF PRINTING PRESSES

An eccentric type roller stud or mounting for the cam follower or roller in which an adjustment can be made to increase the pressure between the platen and printing form insures proper locking without removing the main gear cam wheel from the machine or resurfacing either the raceway or follower. Patent 2,703,049 by Joseph M. Bauer.

VIBRATOR MECHANISM

For distribution of an ink film, a vibrator bar is mounted in a frame for endwise reciprocating movement longitudinally of frame and transversely of axes of distributing cylinders. The bar has a concealed mount and cam translates longitudinal movement into axial reciprocation. Patent 2,703,050 by Harry W. Faeber, assigned to Time, Incorporated.

PRINTING PRESS COOLING ROLL

The cooling roll of the invention involves the use of compressed air to increase heat absorption by injection of a continuous stream of the compressed air into cooling water at the rotary unions of the shells of the cooling rolls. Patent 2,703,224 by Paul C. Robinson, assigned to Arkell and Smiths.

SHEET FEEDING MECHANISM

Useful in handling forms such as freight bills, invoices, and the like, as they come from a printing machine in the form of rolls of strip paper, the mechanism is for use with a collating machine where a plurality of strips are fed in precise registration to each other to points where the strips are glued, severed, etc., to provide individual sets of sheets of paper. Patent 2,703,239 by John F. Curran and John P. Hoffer.

COUNTING CIRCUIT CONTROL FOR ELECTROPHOTOGRAPHIC PRINTERS

Patent provides a high speed printer of the electrostatic or electrophotographic type wherein the objects to be printed are automatically fed into the printer and subsequently ejected upon completion of a predetermined number of

here's how Rouse REDUCES YOUR TIME COSTS

CUT A FULL GALLEY OF MIXED MEASURES SLUGS IN ONLY 35 SECONDS

Rouse BAND SAW

No more gauge setting! No more reclamping or measuring! That's why the Rouse Band Saw offers you by far the most economical way to accurately cut slug lines to different measures in the shortest possible time. No other machine nor method can even come close to this achievement.

If you operate one or more linecasting machines on variable measure composition, the Rouse Band Saw will do the work of hours in minutes. Expensive time saved will be unusually great in work requiring frequent changes in line measures, such as ad work, catalog runaround work, etc.

NEW ROUSE CATALOG

Write for your copy TODAY!

CUT 1000-1200 ACCURATE MITERS IN ONLY 1 HOUR

Rouse POWER MITERER

If you need miters in either small or large quantities, no other machine nor method can turn out anywhere near as many perfect joining miters from strip material. That's how the Rouse Power Miterer can slash your time costs by doing work in minutes that now takes hours. It quickly pays for itself in expensive time saved.

From the smallest job shop up to the largest plant, only Rouse makes a Power Miterer for every type of use. Can be bought as a bench model or with any other equipment you wish.

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MITERING MACHINES
LEAD and RULE CUTTERS
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SOLD BY

Western Newspaper Union

E. C. Palmer & Co.

Harry W. Brintnall Co.

printed copies. A photoconductive printing roll is utilized. Patent 2,703,280 by Louis Boydston Butterfield and John Henry Sulser, assigned to Western Electric Co., Inc.

ROLLER ADJUSTMENT FOR PRINTING PRESSES

The applying rollers are individually adjusted about and relatively to the axis of the transfer roller of presses of the type in which a plate cylinder is mounted upon an etched plate to which water and a water repellent ink are applied. This insures that the applying rollers will be spaced uniformly from the transfer roller and the plate cylinder at all times. Patent 2,703,525 by Laszlo M. Stempel, assigned to Laszlo M. Stempel and Albert Charles Nolte.

RECIPROCATORY FEED MEANS FOR ROTARY PRINTING MACHINES

Printing and impression cylinders have working surfaces only along a portion of their peripheries, the remaining portions having reduced radii so as to periodically form a spacious free gap between the cylinders and permit grippers to pass through, either reciprocatingly or continuously, to seize and forcibly pull a sheet during the printing operation. Patent 2,703,526 by Gustav Hugo Hansson, assigned to Aktiebolaget Hedemora Verkstader.

ANTI-OFFSET POWDER DISTRIBUTOR AND COLLECTOR

This powder distributor is mounted near the frame of a printing press conveyor by which freshly printed sheets are conveyed to a jogger or stacker. The distributor prevents offset of ink and the accumulation of a powder cake and the delivery of lumps onto a freshly printed sheet. Patent 2,703,551 by William T. Daniels.

DOCTOR BLADE AND MOUNTING FOR PHOTOGRAVURE PRINTING MACHINES

Invention is based on the discovery that a thin doctor blade formed of resilient material may be placed under transverse stress. A blade thus stressed will automatically adapt its shearing edge to the surface of the cylinder with less pressure than is required under prior practice. Patent 2,704,026 by Edmund A. Rogge and William A. Roehm.

MULTICOLOR OFFSET PRINTING PRESSES

The continuous web feeding offset press of the invention is capable of maintaining a highly precise registration between several successive imprints, the registration being accurately adjustable while the press is in full motion. Patent 2,704,027 by Constantine N. Neklutin, assigned to Universal Match Corp.

ROLLERS FOR LITHOGRAPHIC OFFSET PRESSES AND THE LIKE

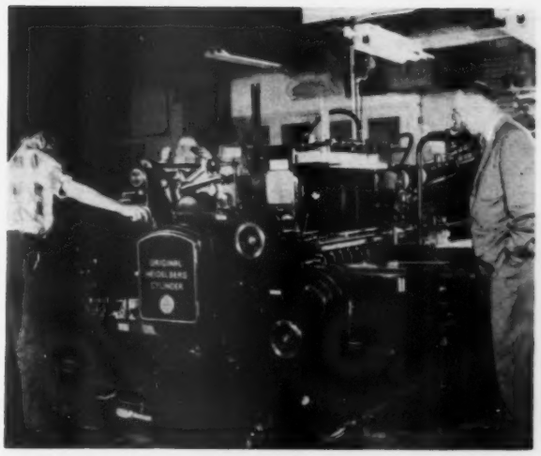
Invention provides a dampening roller which resiliently contacts the plate cylinder of a lithographic offset printing press and maintains a high order of water uniformity throughout the length of the molleton cover which constitutes the peripheral portion of the dampening roller structure. Patent 2,704,392 by Joseph Schultz.

SCREEN PRINTING MACHINES

This machine has a squeegee for reciprocal traversing movement with the printing being accomplished thereby when frame of machine is in horizontal position. Novel control means are associated with squeegee for selectively limiting length of printing stroke so that work of varying size and shape may be accommodated. Patent 2,704,510 by Edgar Walsh, Jr., assigned to Eugene Landesman.

CONVENIENCE IS THEIR AIM

Drive your car right into the hotel, register in the garage, and go directly to your room. That's the way Craftsmen will do it driving to the 36th Annual Craftsmen's Convention to be held at the Netherland Plaza Hotel, Cincinnati, O., August 7-10. The Netherland Plaza Hotel, one of America's most modern hotels, has a garage as part of its structure. Motorists will find it convenient to drive right into the garage and be taken directly to their rooms.



Western Installation—Anderson, Ritchie & Simon, a Los Angeles printing plant, has announced the installation of a 21 in. by 28 in. Original Heidelberg Cylinder. Pictured are Pressmen Hy Coleman and Fred Reimer, and Ward Ritchie (from left to right). Heidelberg Western Sales Co. states this was the first western installation of the new machine.

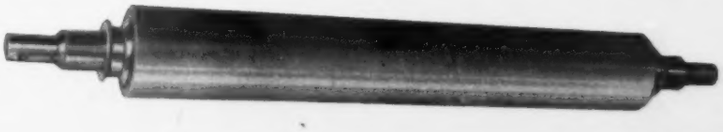
Like Davy Crockett . . .

WE TOO, ARE PIONEERS!

. . . But Our Field is ROTOGRAVURE

• Pioneers always have a wealth of experience. And that's true of Standard Process Corporation, pioneers in the rotogravure equipment and supplies field. For example, the cylinder shown below embodies 27 years' experience in manufacturing, repairing, copper plating and replating rotogravure cylinders.

If it's about Gravure Equipment, write us.



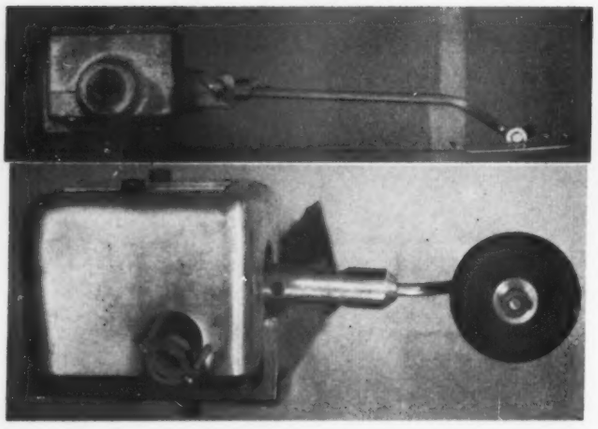
STANDARD PROCESS CORPORATION

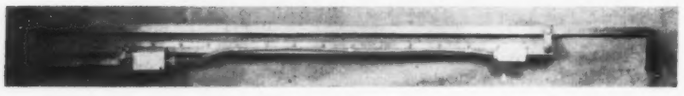
Manufacturing Gravure Equipment and Supplies

2704 W. Roscoe Street **Chicago 18, Illinois**

Cooksey System of WEB CONTROL

EQUIPMENT DESIGNED TO ACTUALLY PROTECT YOUR PRESS WHEN A WEB BREAKS...INSTEAD OF MERELY STOPPING IT





WEB BREAK DETECTOR

- Precise and quick acting to stop press instantly at the time of a web break.
- Has running position, threading position and two lockout positions.
- Press cannot be operated at high speed unless shoes are in operating position.
- Can be mounted in any and all positions in press.
- Shoe pressure and range of operation can be easily adjusted for any web condition.

TROLLEY

- The most outstanding advancement made in web break detector systems in recent years. It prevents the web, after the impression, from lashing back and wrapping around the printing cylinders.
- The Cooksey System is the only system that provides this feature therefore it is the only system that can actually prevent damaging wrap-ups due to web breaks.

WEB SEVERING DEVICE

- It is compact, and the action is positive and instantaneous.
- Cuts completely across the whole sheet.
- Clean cut web comes out of printing unit at time of a web break instead of ragged tails or loose pieces that may cause additional delay.

SALES AGENTS:

THE GOSS PRINTING PRESS CO., CHICAGO
R. HOE & CO., NEW YORK
WOOD NEWSPAPER MACHINERY CO., NEW YORK

For Information Write To

KORTHE ENGINEERING CO.

9353 SEYMOUR AVENUE
SCHILLER PARK, ILLINOIS

Servicing Old Presses

An answer to the question of why parts for old newspaper printing presses are expensive and hard to get was supplied at the Great Lakes Newspaper Mechanical Conference held in Detroit. It came from W. C. Pratt, sales engineer, Goss Printing Press Co., who spoke at the Non-Metropolitan Newspaper Meeting, Sunday, January 16, Hotel Sheraton-Cadillac.

Pratt revealed that there are nearly 2000 Goss flatbed cylinder presses still in operation, the models of which are considered as discontinued. Including all the presses manufactured by Goss there are approx. 4100 which are considered obsolete and discontinued.

Set-up Time is Expensive

Pratt explained that the manufacture of press parts in small quantities was an expensive operation. A large part of the cost of the manufacture of any piece of machinery is the setup time on factory's lathes, planers, milling machines, etc. Usually, the manufacturer tries to hold the setup time to a minimum by setting up for a large quantity of any one part.

Occasionally, it is necessary for the press manufacturer to break into a setup on a machine in order to turn out a vitally necessary press part for a customer. Pratt emphasized that this was a costly service which is essential to keeping the newspaper in business.

He related Goss is servicing flatbed presses as old as 60 years and rotary presses over 50 years old. The storage room needed, he said, would be tremendous for carrying in stock even a full set of gears, for instance, for all models that are still in operation.

Have Critical Gears on Hand

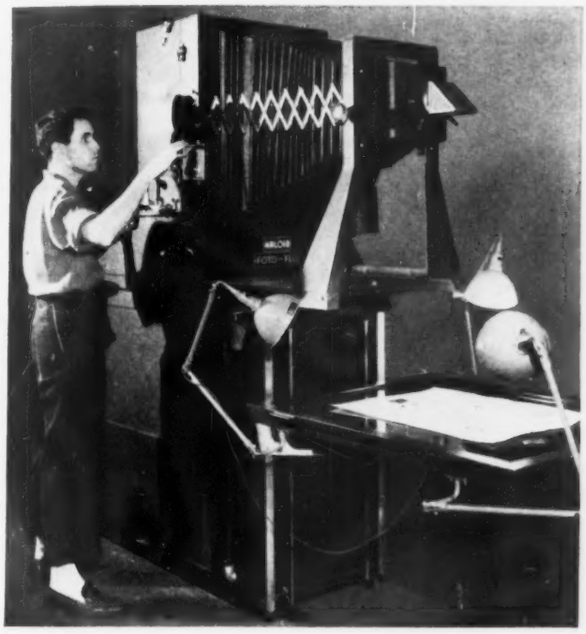
On carrying emergency parts, he said: "I realize it is hard for the mechanic to predict what gear or other part is going to go next, but it would be wise to try and get the boss to have a critical gear or some other part in stock. Past experience or the condition of a gear or part can sometimes indicate to the pressman where his next bit of trouble may show up. It could be pointed out to the publisher that this is good insurance and if the replacement part was made in the normal process, the cost to the publisher would be a great deal less than if that part had to be made on an emergency breakdown basis."

"Why couldn't we have been born 5000 years later when all the new printing equipment will have been designed?"

Production and Mechanical Executives are invited to submit to the editor informally in a letter devices which have helped production in their plants.

FOTO-FLO® MODEL C PHOTO-COPYING MACHINE

Helps Break Ad Production Bottleneck for the Cleveland Plain Dealer



The Foto-Flo Model C Photo-Copying Machine quickly reproduces photocopies of advertising layouts for Composing Room, Art Department and Photoengraver at Cleveland Plain Dealer. Only takes about seven minutes to get a photographically accurate copy of the advertiser's layout. Speeds production in Art Department, Composing Room and Photoengraving Department. Pays for itself in speed and efficiency.

Send for 4-page folder showing how Cleveland Plain Dealer speeds all phases of ad production.

THE HALOID COMPANY

55-10 HALOID STREET, ROCHESTER 3, NEW YORK
BRANCH OFFICES IN PRINCIPAL U.S. CITIES AND TORONTO

Foto-Flo® and Rectigraph® Photo-Copying Machines. Photocopy Papers and Chemicals. Photographic Papers. Negative Materials for the Graphic Arts. XeroX® Products for xerography.

A PROFESSIONAL INTEGRATED APPROACH

to Production Efficiency

. . . planned to meet your requirements while relieving your mechanical staff of design and construction problems.

Publishing business managements can find substantial advantage in the services of Professional Engineers. The Engineer's approach is scientific. His sole concern is the best interest of the client.

OUR STAFF

An integrated engineering organization, including a group experienced in printing problems, backed by a complete staff of Engineers, Architects, Project Managers, Construction Supervisors, Procurement and supporting service personnel.

. . .

OUR SERVICES

1. Investigations of plant sites.
2. Analysis of existing operations.
3. Reports on design and estimates of cost for new departments, plant additions and new plants.
4. Complete plans and specifications.
5. Procurement of materials and equipment.
6. Supervision of Construction and Equipment Installation.

We are Professional Engineers and represent our clients as construction supervisors — we are not builders or construction contractors. Our only interest in processes, equipment and materials is the best interest of our clients.

CHAS. T. MAIN, INC.

CONSULTING ENGINEERS SINCE 1893

BOSTON, MASSACHUSETTS • CHARLOTTE, NORTH CAROLINA

Cabot Grant to NPIRI

Godfrey L. Cabot, Inc. recently announced a grant-in-aid of $3 thousand to the National Printing Ink Research Institute, Lehigh University. This grant will help support the work of the Institute on the effect of changes of surface chemistry of carbon blacks on the rheological and other properties of printing inks. Dr. C. A. Stokes, research director of Cabot, has announced that W. D. Schaeffer will act as technical consultant to the project already underway.

Inertia

(Continued from Page 100)

Industry has made a beginning in the establishment of standards for the industry and the future looks much brighter.

The Council works to establish standards by collecting data, holding discussions among people in the industry, sifting through practices and procedures of small plants and large plants, adding scientific testing, and bringing specific methods to a point of evaluation. In other words, the Research and Engineering Council finds the best procedure in terms of dollar savings and in terms of quality control. That dollar savings result from the use of standards has been proved time and again.

All Benefit By Standards

Every printing or publishing company in America can benefit by standardization. And that is true whether the company is large or small; whether it carries out standardization on an industry-wide basis or on a plant-wide basis.

Development Thru Research

Now let us turn to the second way in which our industry is most likely to reduce costs in the coming years—technological development through research. Unfortunately, our industry is a slow-moving one, and developments come about with much difficulty. Usually the members of our brotherhood are reluctant to accept changes until forced to do so by competition. Since the end of World War II there have been great strides in the development of various printing processes because of the pressure of this competition.

Each of these processes is making advancements all the time, and each new development of a particular process offers further competition to the others, which then seek new methods to regain lost ground.

We can expect this year to see concrete results of the great progress of the past 10 years. Many of the new processes and much of the new equipment will become available commercially on a wider scale than before. Also, this year, the start on increased research and development in several entirely new processes may bring a major revolution in the printing field.

Let us see how some of these developments will tend to reduce our costs of production.

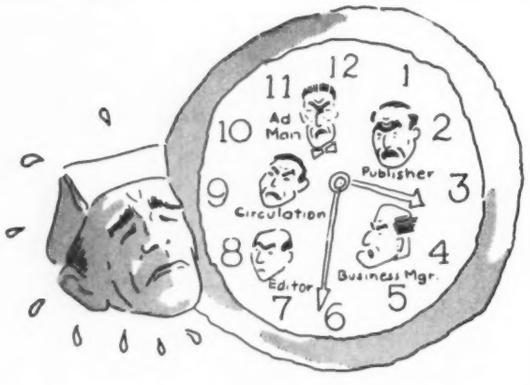
Short Run Color

As you know, the widespread use of color printing is generally made possible by large editions so that the cost of camera work, platemaking, color correction, and press time can be distributed over a large number of impressions. However, a process aimed primarily at reducing the cost of short-run color printing has been developed by the Eastman Kodak Co., and it could go a long way toward reaching the great potential market of customers who want short runs. The new technique departs from conventional methods of color printing in the following ways: (1) All color correction is achieved photographically by masking. There is no handwork corresponding to the work of the color etcher; (2) Printing is done in three colors instead of the conventional four colors, and (3) Practically all the operations are designed to achieve registration automatically.

Electronic Separation

In the field of electronics several experimental developments are moving forward with the aim of producing faster and more accurate preparation of color plates and black and white halftones. One of these developments is a device known as the Springdale Color Scanner. The Scanner automatically produces continuous-tone color-separation negatives from original color transparencies with great accuracy, calculating and integrating the color and black components required for reproduction. Thus, more than one transparency can be separated at one time.

Another electronic device similar to the Springdale Scanner is the Acme



Question: **WHAT MAKES THE DIFFERENCE?**

Answer: **TINGUE, BROWN BLANKETS,**

of course!

When the clock says the run **should be** off, don't let blankets cause you trouble. Use trouble-free, efficient Tingue, Brown Printing Press blankets! Get rid of Operation Sour-Puss! Make it Operation Happy! Get Tingue, Brown Blankets!

. . . Always, Quick Dependable Delivery!

Tingue, Brown Blanket combinations are available for all conditions and any required gauge.

TINGUE, BROWN & CO.

723 E. Washington Blvd., Los Angeles 21, Calif., PRospect 6023
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1765 Carter Avenue, New York 57, N. Y., CYpress 9-8800

TINGUE
PRINTING PRESS BLANKETS

ONLY

WETTER

ROTARIES

have SAS* appeal

Specially designed for today's rotary presses, this sturdy cam-actuated machine prints numbers in a line parallel to axis of the impression cylinder.

SPEED

—in ability to keep pace with the fastest presses

—in set-up time with Quik-Lok Clamp

ACCURACY

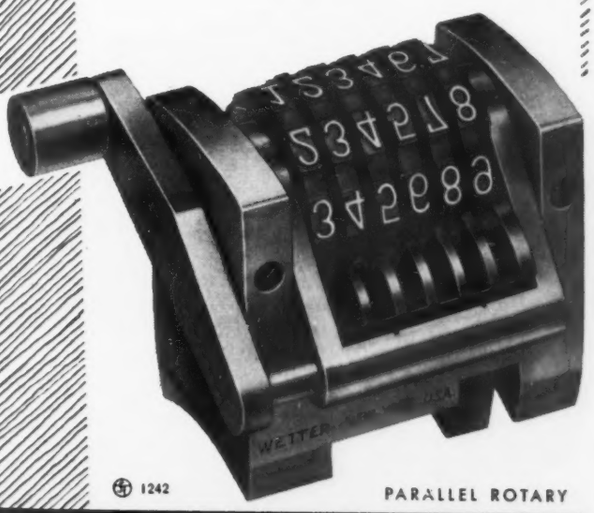
—in number sequences

—in in-line printing

SHARPNESS

—in impressions

Wetter also manufactures other models for flat bed or cylinder presses to meet all numbering requirements of the printing trade. Write today for descriptive folder.



1242 PARALLEL ROTARY

WETTER NUMBERING MACHINE CO.

ATLANTIC AVENUE & LOGAN STREET · BROOKLYN 8, N.Y.

ONLY UNION MADE NUMBERING MACHINE IN U.S.A.

TRUE MOLD DISKS MEAN PERFECT TYPE HIGH SLUGS..

...AND STAR MOLD DISKS ARE TRUE!

To cast type high slugs, you require a perfectly true mold disk. The STAR Mold Disk is made to position molds accurately for casting, ejection and trimming. Every STAR Mold Disk has all critical banking surfaces precision ground, insuring absolute accuracy. The best iron available for the purpose is used, and manufacture is not hurried. A full year is taken from rough forging to finished disk. This slow seasoning of the metal reduces the extent of warpage to an absolute minimum. Mold pockets are cut in exact relationship to each other and concentric to the hub opening, to give proper line-up with the pot and ejector.

STAR Mold Disks are available for both large and small diameter hubs. Allen Head mold cap screws are supplied on request. Every STAR Mold Disk is complete with studs, keepers and screws.... there are no extras to buy. The price is right, too. You'll be surprised how much less it costs to replace a worn, troublesome disk with a STAR—the very best. Write for our proposal today.

Precision TRADE ★ MARK Parts

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1327 BROADWAY, KANSAS CITY, MO.
AGENCIES:
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LOS ANGELES • DENVER
BOSTON • CANADA: SEARS LTD.
and Agents Overseas

LINOTYPE PARTS *Company, inc.*

SOUTH HACKENSACK, N. J.

St. Louis Firm Installs Miehle—Simmons-Sisler Co. recently announced the installation of a Miehle No. 61 Two Color Offset Press. Simmons-Sisler indicated that the No. 61 Two Color was part of an expansion program. Additional space has been acquired with the purchase of an adjacent building. Looking over the new installation are (left to right) R. Kleinschmidt, Miehle representative; A. O. Brossard, vice president and general manager; John Tross, superintendent, and Milton Cooke, offset foreman.

Top Quality Printing Through "WEATHER CONTROLLED" Forms
Every little change in the weather will affect wood base or combination forms. Exposure to dampness—or dry air—plays havoc with wood base.
Control your production, protect your reputation for quality printing by mounting all plates on PMC Sterling Toggle Base. Your printing will be consistently "top grade" when plates are on rigid metal.
Forms on Sterling Toggle Base are unaffected by weather changes ...there is no shift, sag or spring. Impression is maintained at the printing line throughout the run.
The Printing Machinery Company
436 Commercial Square • Cincinnati 2, Ohio

Color Separator being produced by Acme Teletronix Div. of NEA Service. The devices differ in that the Springdale produces negatives while the Acme produces positives. In a test run the Acme produced nine 4-color sets in a 7½ hr. period.

The availability of these and other color scanners being developed offers possibilities of substantial savings and should further increase the tremendous increase in the use of color. With them, a big step can be taken in the direction toward production-line methods.

The Scan-a-graver

An automatic photoelectric scanner and engraver that produces plastic halftones from photographs without any intermediate steps is being used by many small daily and weekly newspapers. This device, called a Scan-a-graver, was developed by Fairchild Graphic Equipment Company. During the past year this company went a step further with its Scan-a-sizer, which eliminated one of the handicaps of the Scan-a-graver—the necessity for same-size copy. The Scan-a-sizer can enlarge and reduce while the engraving is made.

What probably could be the most important cost-reducer in the industry lies in the development of phototypesetting. Among the phototypesetting machines that are being developed or have been developed are the Fotosetter, the Monophoto, the Photon, and the Linofilm. The advantages of these machines are:

1. *Space saving.* With phototypesetting you can keep any job alive by placing the film in a job jacket in a file cabinet. This saving of space provides ease of handling and eliminates idle capital investment.
2. *Time and money saving.* Either negative or positive film is immediately available for platemaking, and a range of type sizes from 4 pt. to 36 pt. is available directly from the machine in two magazines instead of the 10 or more magazines required for conventional type casting.
3. *Better results.* The composition on film can be blown up to 2 in. or larger in a conventional enlarger. The type retains its sharpness and needs no retouching.

Cold Typesetting

The machines that are often referred to as glorified typewriters are commercial realities and are producing their share of typographic copy for platemaking. We can expect these machines to expand their usefulness as the research and engineering programs continue to pour out dividends for their companies. Among these machines are the electromatic typewriters of the International Business Machines Corp., the Varitypers of the Ralph M. Coxhead Corp., and the Justowriter of the Commercial Controls Corp.

Xerography

Among the new printing techniques is that of Xerography, a process based entirely on physical and electrical phe-

nomena. In its commonest form, Xerography is a dry photographic process that utilizes a unique type of plate which is not destroyed by exposure to light. Hundreds of images can be made from a single plate, which can be on the press and producing copies within 3 min. after receipt of copy.

When we consider these and other new developments it is not difficult for us to see the terrific potential of the printing and publishing industry.

Result of Lack of Initiative

It seems, however, that these improvements for cost reduction are happening *around* us but not *to* us. The publisher cries to the printer for lower prices and greater efficiency, and the printer, in turn, bewails the machine manufacturers for bigger and faster machines. Everyone is passing the buck and waiting for some unknown "George" outside the industry to do it, and thus increase the competition. In order to meet the challenge of competition in the rapidly changing technology of today we should follow the example set by the other great industries of this country. We should standardize and we should devote some effort to research.

The first step toward this goal was made a few years ago with the establishment of the Research and Engineering Council of the Graphic Arts Industry. And I am certain that the printers and publishers of this country will be able to read on the wall a handwriting of their own choosing if the Council receives the enthusiastic support of an ever-increasing membership.

Offset Blankets

(**Continued from Page 71**)

evaporating solvents such as kerosene are harmful and should be avoided. They stay in the blankets long enough to cause swelling, embossing or a mushy print.

The lithographer should stay away from coal tar solvents, ketones, esters, any chlorinated solvents and especially turpentine and pine oil. The latter two will cause oxidation of the blankets resulting in tackiness and subsequent glaze. The wash should be kept from the edges of the blankets as much as possible. If it is permitted to seep under the blanket, separation of the layers and plies may take place at the edges.

Occasionally it will be necessary to resort to more drastic means to recondition a blanket where inks were permitted to dry and where a glaze has developed. This glaze may be due, aside from dried varnishes and oxidation, to dried gum and to coating coming off the paper. To remove this glaze, lye washes or, with reservation, some of the commercial glaze removers should be used. When this becomes necessary, the blanket should be taken off the press to perform this operation.

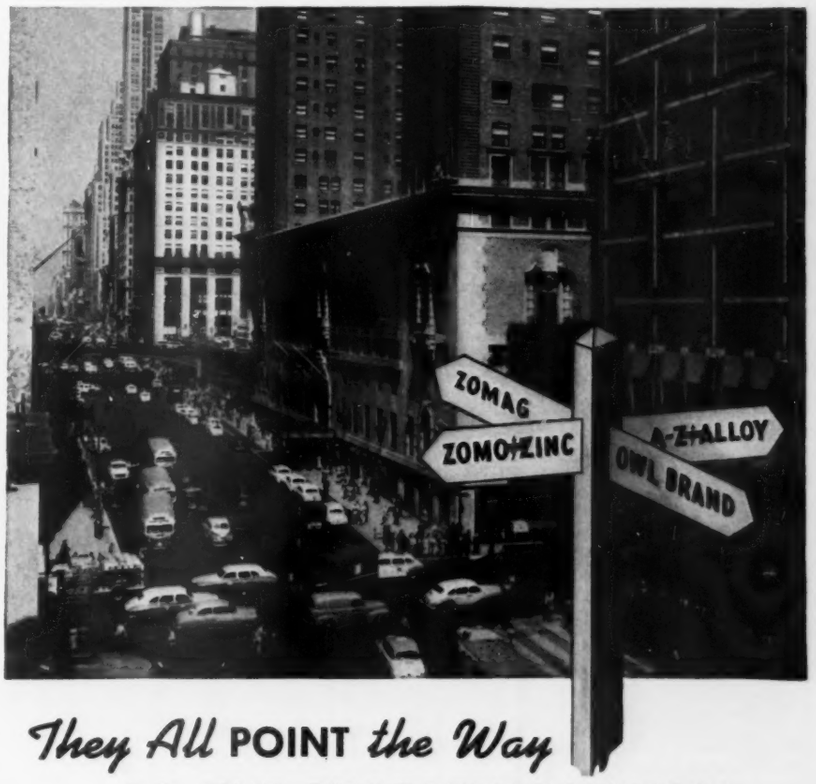
Selection of Blanket

A number of factors determine the selection of the proper blanket for the proper job. Most important of all are inks. Straight linseed oil inks that have hardly presented any problems at all, are slowly receding from the market. Modern fast drying synthetic inks that contain at least a good portion of petroleum solvents require a careful synchronization between inks and blankets just as they have to be considered in the compounding of modern rollers. Furthermore, the appearance of inks that contain polar solvents will present the blanket manufacturer with problems he has not always been able to conquer. Another factor in the selection of blankets is the stock to be printed. Rough cardboard and coated paper may require different blankets. The increasing application of grainless and presensitized plates will tax the specification of blankets as to evenness and smoothness to an ever increased degree.

Considerable research has been done by the blanket manufacturers in connection with both web offset printing as well as dry offset printing. The blanket manufacturers have already contributed considerable to the accomplishments in both of these processes today.

Conclusion

The present day high speed presses, paper, ink, rollers and blankets must all work together. Continued research and progress may make the blankets and rollers of today obsolete tomorrow.



They All POINT *the Way*
TO FINE PHOTOENGRAVINGS!

ZOMO ELECTRIC ZINC – The standard high quality metal. Quick etching and clean. Widely preferred for its "all-purpose" qualities!

A-Z ELECTRIC ALLOY – Toughest, most durable zinc alloy. Fine grain for halftones or line. Excells, for direct printing and mat molding.

OWL BRAND – Medium-tempered, non-buckling, quick etching, long wearing.

ZOMAG – The only magnesium metal especially tailored for either the conventional or fast etch photoengraving processes.

All these metals carry our unconditional guarantee of uniform composition, accurate gauge and flawless finish.

ZOMO ELECTRIC ZINC · A-Z ELECTRIC ALLOY
OWL BRAND · ZOMAG

Sioux Falls (S. D.) Daily Argus-Leader

Since early in 1954, the Sioux Falls (S. D.) **Daily Argus-Leader** has operated in a new and modern plant which represents an investment of more than $1 million. In the three-story building (shown above) is provided 45,000 sq. ft. floor space. Here are produced three daily editions and a Sunday paper for a combined circulation of 52,000. The Argus Leader Co. claims its new press is the largest in five Northwest states. The 96 page press consists of six 16 page units. It is designed for printing a 48 page newspaper in three colors and black at 40,000 papers per hr. Paper rolls are handled on a track system in the basement. Architects for the project were Hugill, Blatherwick & Fritz of Sioux Falls. The floor plan below represents the equipment layout in the **Argus-Leader's** composing room and stereotype department.

Composing Room

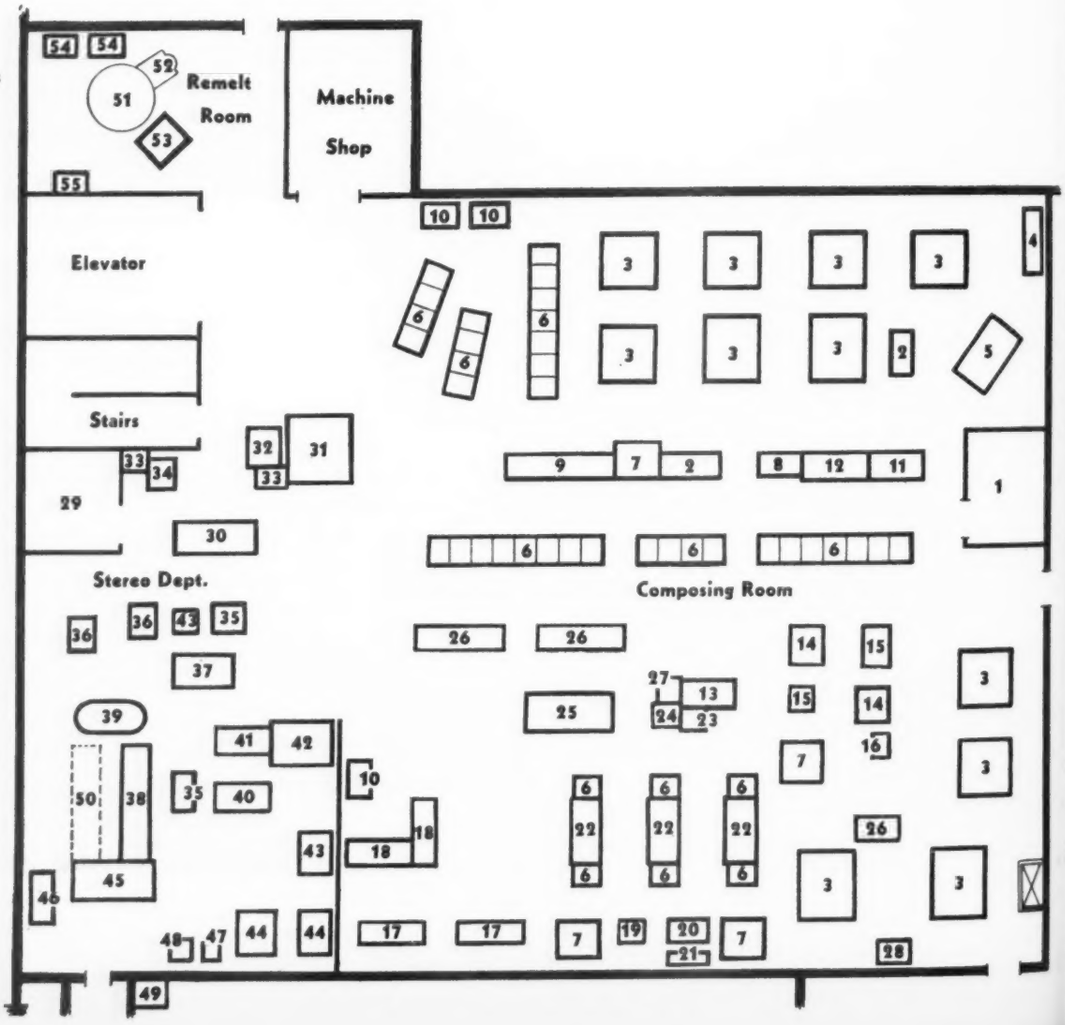
1.—Foreman's Office
2.—Copy Desk
3.—Linotype Machines
4.—Machinist's Bench
5.—Proofreader's Desk
6.—Makeup Trucks
7.—Saws
8.—Proof Press
9.—Galley Cabinet
10.—Page Storage Cabinets
11.—Storage Cabinet
12.—News Dump
13.—Ad Copy Desk
14.—Ludlows
15.—Ludlow Matrix Cabinets
16.—Ludlow Burnisher
17.—Elrod Casters
18.—Material Storage
19.—Slug Stripper
20.—Power Miterer
21.—Border Rack
22.—Ad Assembly Cabinets
23.—Ad Bank
24.—Cast Storage
25.—Page Proof Press
26.—Ad Dumps
27.—Dumb Waiter
28.—Magazine Rack

Stereo Dept.

29.—Foreman's Office
30.—Packing Table
31.—Mat Roller
32.—Alico Mat Drier
33.—Cabinet
34.—Mat Knife
35.—Mat Scorchers
36.—Master Former
37.—Hammond EasyKaster
38.—Heavy Duty Pony Autoplate
39.—Kemp Metal Pot
40.—Plane-O-Plate Shaver
41.—Flat Cast Table
42.—Saw-Trimmer
43.—Utility Bench
44.—Router
45.—Live Plate Table
46.—Sta-Hi Master Router
47.—Plastic Mat Knife
48.—Finishing Block
49.—Plate Drop to Pressroom
50.—Future Pony Autoplate

Remelt Room

51.—Kemp Remelt Pot
52.—Metal Lift
53.—Pig Mold
54.—Compressors
55.—Vacuum Pump



KEMP 10 TON OVAL POT installed by the Montreal La Presse to replace old oil underfired pots.

PUBLISHER SAVES 56% ON CASTING COSTS WITH NEW KEMP OVAL STEREO POT

Fuel Savings alone amount to $185.83 per month with Kemp Unit.

By installing Kemp equipment, this Canadian publisher reduced his cost per plate from 3.34c each to 1.46c...*a 56% saving*. Fuel savings amounted to *$185.83 per month* during the first twelve months. Also by casting at a *faster* rate with *less* spoilage, overtime costs have been slashed substantially—$4,000 were saved in the first year.

Casting room temperatures have *declined* from an average of 100-105 degrees to 80 degrees or lower. And instead of drossing 3 times a week as formerly, drossing is now done *once* a week with a *66% reduction* in dross losses. Another case where Kemp Engineering delivers the goods in terms of dollars saved for its customers. Why not find out how Kemp can save you money, too?

KEMP OF BALTIMORE

IMMERSION MELTING POTS

for technical information and facts on how we can help you with your melting problems, write:

THE C. M. KEMP MFG. CO.
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CARBURETORS • BURNERS • FIRE CHECKS • ATMOSPHERE & INERT GAS GENERATORS
ADSORPTIVE DRYERS • METAL MELTING UNITS • SINGEING EQUIPMENT • SPECIAL EQUIPMENT

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Galleys and Cabinets

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- REDUCE COSTS
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7 Regular Sizes . . . others to order

UNIFORMITY is the SECRET!

Rust Resistant
BLACK BEAUTY STEEL
has greater accuracy at lower costs

ALUMINIZED STEEL
has high precision uniformity at slightly higher cost.

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All Steel GALLEY CABINETS

- One-Piece, Full Length Galley Supports
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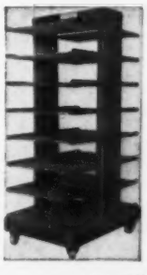
Special Sizes to Order

6 Regular Sizes • 25, 50, 100 Capacity



Movable STOCK RACKS

Speed Stock Handling
Provide Piling and Storage Space

MODEL A
13½x20" boards notched for Miehle. 30 sq. ft. of shelf space on 4¼ sq. ft. of floor.
$62.00

MODEL B
17x22" boards, notched for Kelly. 41½ sq. ft. of shelf space on 8¼ sq. ft. of floor.
$72.00

Mayville METAL PRODUCTS CO.
MAYVILLE, • WISCONSIN

Bull Sessions

(Continued from Page 81)

sion which ensued, it seems that no molding combination is adaptable but that each stereotype executive must determine the best molding combinations for his particular plant.

With respect to a flat casting box, it was stated that a box equipped with vacuum has definite advantages over one not so equipped. The back should be cleaned regularly each month to secure the full pulling force of the vacuum. One executive stated he did have a vacuum back curved plate box. He noted that ½ in. borders do not concave in the plate and he gets a more solid plate.

The question was asked from the floor that if a stereotyper had his choice of either a Sta-Hi machine or a vacuum box (if he could only have the one piece of equipment) which would you take? It was the consensus of opinion that the Sta-Hi former should be installed first.

Another question was related to the poor printing of 72 pt. Ludlow streamer lines on page 1 of the paper. The answer was that perhaps in some shops the slug burnisher reduced the height of the slug and this could be remedied by putting a strip of Kraft paper under the slug line.

It seemed to be the consensus of opinion that in plants where combination metal is used for both composing and stereotyping purposes that the metal should be maintained at as near the Linotype formula as possible where the daily edition press runs are not too great.

It was also the consensus of opinion that oil should never be used in a metal pot in attempts to either reduce metal shots or as a flushing agent. Preferably one of the standard fluxes should be used. It was also brought out that several of the stereotype executives had been advised that the accidental overheating of metal does not affect the metal formula in any way. The metal temperature, however, should be watched at all times to see that overheating does not occur.

The subject of paper shipping and handling damage on the part of the railroads came up for discussion. It seems that in one instance, even though the rolls were strapped securely in the car, they have shifted as much as 1½ ft. during transportation. It was also stated that in the case of the New York Central Railroad, a card was tacked on the car bearing the message: "This car clocked." In that instance, there was no damage to the rolls during shipment. On another occasion, a car was not clocked, but the sign was tacked on the outside and the rolls arrived at destination without damage.

One well-known newspaper stereo-press superintendent stated it took eight months to get a refund of $62 from one of the railroads. After signing eight claim sheets at the time of making the complaint, he gave up. However the refund came through eight months later.

Old Tires Have Good Use

The discussion which followed included participation by a panel composed of George Towle, Plymouth (Ind.) *Pilot News*, Edward E. Newton, Huntington (Ind.) *Herald-Press*, and H. P. McChord, Bedford (Ind.) *Daily Times-Mail*. The subject of newsprint handling was brought up and one mechanical executive offered the suggestion that old rubber tires afford excellent cushions on which to drop paper rolls from the tail end of a truck. Another suggestion was that the roll be placed on a cradle-type skid which is suitable for sliding down a chute into the basement where the paper is stored.

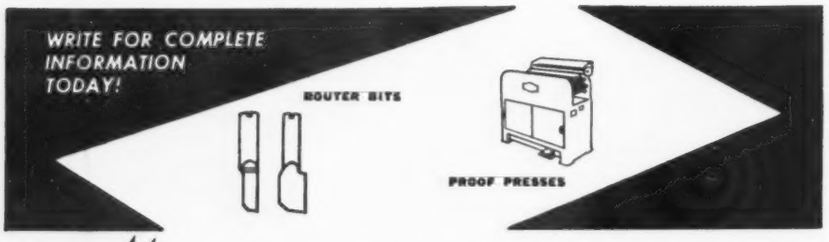
Whether to mold or print direct from Fairchild engravings was again a topic on which several offered opinions. It seemed that the majority of newspapers using these cuts obtain better results by printing direct from the engraving.

To remedy folder slippage, one executive stated he applied ¾ in. wide tape to the cutting cylinder to prevent slippage from low to high side in associated runs. The tape is coated with abrasive on the top surface and with an adhesive on the lower surface. The tape helps pull the paper into the folder positively.

MARKING CUTS FOR FILING

A convenient way in which to mark unmounted cuts for filing purposes so that they can be filed according to a code system, or to identify a cut in case it is to be used again, can be accomplished by simple means. Just use a paper-wound china marking wax pencil. These pencils may be obtained at any stationery store. Most suitable colors for marking are white, yellow, orange or red. The wax marking can be removed easily by wiping with a cloth.

The NEW and IMPROVED Wesel Router is built for heavy duty and long life. Special motor eliminates shifting of belts and arm glides smoothly without drag . . . two features that reduce operator fatigue. The Wesel Router is engineered to eliminate most of the maintenance problems encountered with this type of machine.



WESEL MANUFACTURING CO.

Dept. 101 1141 N. WASHINGTON AVE., SCRANTON 9, PA.

Publishers

(Continued from Page 64)

After a few weeks of experimenting with the machine, engravers at the *Tribune* were ". . . turning out flats in 1 min., 45 sec. etching time."

He acknowledged that the combination line-halftone machine has posed a more difficult problem. Schurz added that by dropping the temperature of the etching solution to about 70 deg., it is possible to etch to 0.039 or 0.040 in. depth in one bath.

The speaker thought some newspapers are hesitating to install the Dow-ANPA etching process because of the additional cost of magnesium. On this, he said: "I think in nearly every case labor is at least 50% of your total engraving cost. If you use zinc, you will find it is considerably less than 10% of your total cost.

"The difference is made up with chemicals, repairs, power and light, depreciation, miscellaneous and, I should not forget, travel expense to conventions.

Does Not Mean Layoffs

"Even if your use of magnesium would bring the cost of that material to 10% or 12% of total cost, you should reduce your labor cost to more than offset it. I do not mean you will fire a lot of people. I do mean you can probably produce more flats with the same labor force or possibly you may be able to cut down on overtime.

"You will not make the saving at once but as your men become experienced with the new process, you should find your cost per unit dropping and you should have a better product."

Graphic Arts Manual

The Education Council of the Graphic Arts Industry, Inc. has announced the proposed publication of *The Printing Industry*. This publication will consist of a survey of the many branches, processes, and products of the Graphic Arts. The author will be Victor Strauss of the Presentation Press, New York, N. Y., who recently completed a publication, *Point of Purchase Cardboard Displays*. It is intended that the manual will develop a uniform foundation of information for all individuals entering Graphic Arts and for those now in the Graphic Arts. The four main sections will be: (1) The Common Base, (2) The Plant, (3) The Market Place, (4) The Meeting Ground. The section dealing with the Meeting Ground will reveal the inner relations of the various occupations and activities in the Graphic Arts. A steering Committee has been appointed to consult with representative members of the industry on special problems for the publication. Completion of *The Printing Industry* is scheduled for late 1956.

415 Committee Members

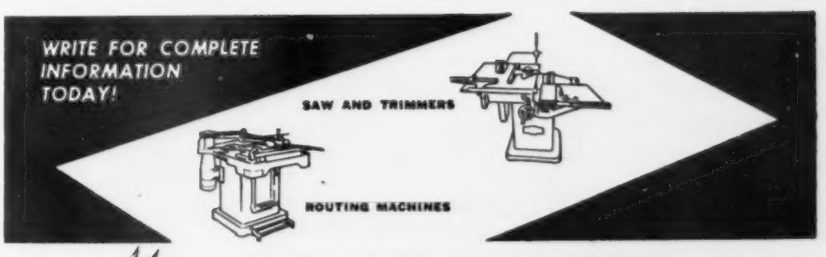
What is believed to be the largest committee ever appointed in the Graphic Arts industry in the United States and Canada has just been announced by Lee Augustine, general chairman of the 1955 Intl. Assoc. of Printing House Craftsmen Convention Committee. There are 415 members from 59 clubs on the Booster Committee for the 1955 Intl. Craftsmen's Convention to be held at Hotel Netherland Plaza, Cincinnati, O., Aug. 7 to 10 inclusive. Though the responsibilities of the Booster Committee members are not extensive, they were given certain obligations as follows: To make every effort to attend the convention in Cincinnati; to serve if asked on the local Club's "On-to-Cincinnati" Committee; to publicize and promote wherever possible the 1955 Craftsmen's Convention.

Equipment Financing

C.I.T. Corporation has announced a new financing program for printing machinery featuring 10 year installment terms geared to match the new, faster depreciation schedules. Under its new plan, C.I.T. has more than tripled its former three year maximum on terms and has tailored payments to the so called sum-of-the-digits method of depreciating equipment. Purchasers can acquire equipment and use depreciation reserves for the payments in a way they could not do previously. The finance charge will be 4.25% multiplied by the number of years of the term of the contract and applied to the original unpaid balance of the cost of the equipment. Down payments will be flexible and tailored to the needs of purchasers, C.I.T. Pres. Sydney D. Maddock stated.

Please take a look at your address on the wrapper in which *Printing Equipment Engineer* is sent to you at your place of employment. If it isn't correct, please tell us about it on a postcard.

Wesel delivers quality proofs more quickly . . . more economically . . . with less maintenance. The EPP-4 features heavier construction and quieter operation. Equipped with mechanical safety guards and automatic stopping. Has improved platen inking.



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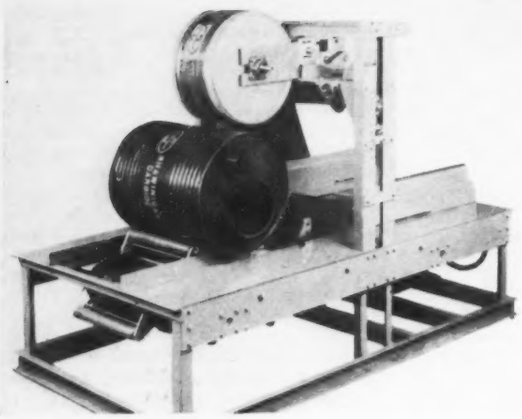


Drum Printing Press—Industrial Marking Equipment Co., Inc., reports a printing press designed for printing empty drums of any diameter. Drums of different diameter are accommodated by raising or lowering the printing head. In operation, the drum is placed on the roller cradles which position them beneath the printing cylinder. Drums are fed in at one end of the machine and delivered at the other. The press uses rubber plates and flexographic inks. For more details, please mention PEE No. 429 in your request.

The **Big Chief REMELTER**

Yes, this is the Big Chief Remelter you've heard so much about and its loyal helper, the wonderful

DUMPERIN

And Seeing is Believing. While in Chicago you can see them in operation at the Tribune, the Chicago American and the American Type-setting plants and in nearby Milwaukee at the Journal and the Sentinel. And when you visit our exhibit at the Edgewater Beach Hotel you will see the imposing list of Big Chief owners throughout the country—the Cream of the Publishers and Printers of America . . . Write for our catalogue.

UNITED AMERICAN METALS CORPORATION
AND AFFILIATED CORPORATIONS
SYRACUSE SMELTING WORKS, EXPORT DIVISION
BROOKLYN 22, N. Y. CHICAGO 12, ILL. CHARLOTTE 6, N. C.
LOS ANGELES 58, CAL. SAN FRANCISCO 7, CAL.

Equipment & Supplies

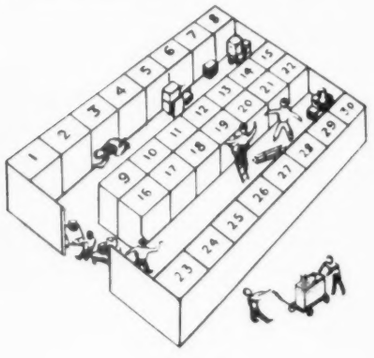
(Continued from Page 52)

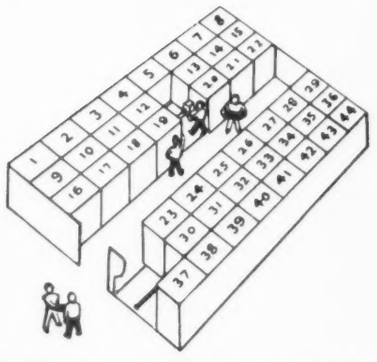
cleaned, says the sponsor. Magnet also claims properties of the solution are such that life and springiness to rubber are restored, glaze is prevented and roller and blanket life is lengthened. For more information, please mention PEE No. 481 in your request.

Rolling Storage System

A compact system by which a company can increase its storage capacity of present areas from 30% to 70% without the need for additional floor space is claimed by the Mobile Storage Div., Dolin Metal Products. The system consists of tracks on which run

heavy steel bases fitted with special grease packed, ball bearing wheels. Existing storage units (shelving, cabinets, etc.) are placed on the specially designed bases which



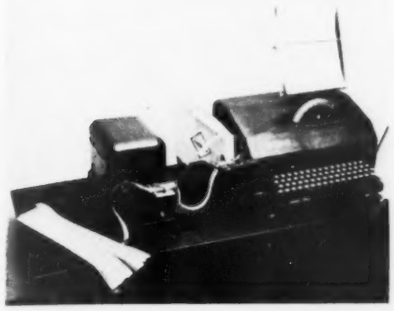


At top is shown a storage area containing an arrangement of 30 storage units requiring two aisles. The same area is shown below it using the Mobile Storage System where 44 storage units are arranged with only one aisle. This represents an increase of 47% in storage capacity.

may be moved back and forth on the track as the need arises. It is claimed that heavy loads in the storage units may be moved with ease. A common arrangement (shown in the accompanying halftone illustration) comprises one row of fixed storage shelving located directly in back of two mobilized rows. Each contains one unit less than the fixed row. This technique may be multiplied by as many such arrangements as the area will permit. Sponsor states the system does away with the need for much aisle space. For more details, please mention PEE No. 430 in your request.

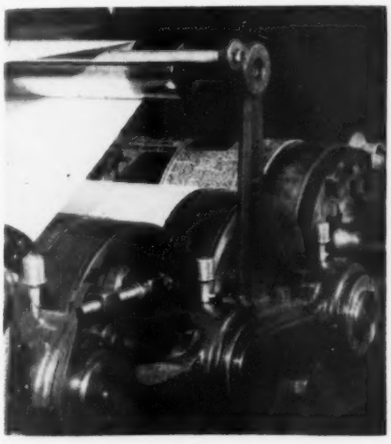
Folded Perforator Paper

Designed for conditions of extended service and high speed equipment, Perfection Folded Perforator Paper is now being produced, states sponsor, the Paper Manufacturers Co. Perfection Folded is available in $\frac{11}{16}$ in. and $\frac{7}{8}$ in. standard widths; special



widths on order. Perforator paper is packaged in 3000 in. and 9000 in. lengths. Paper is 19 in. between folds and dispenses directly from the carton to the perforating machine as shown in accompanying illustration. Perforator paper will operate on most transmitting, or receiving, machines now in use, states sponsor. For further details, please mention PEE No. 493 in your request.

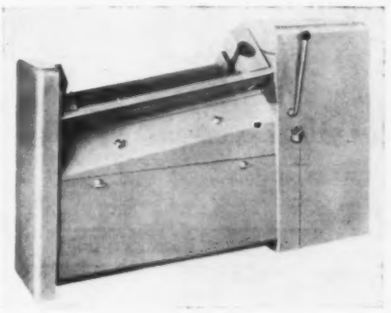
Automatic Greasing — The Beverly (Mass.) *Daily Times* reports no more hot bearings since installing TMCO Automatic Lubricators, says American Publishers Supply, Inc. The lubricators are fed with a grease gun. Vacuum, created by the movement of the shaft over the bearings when there is an air space plus a compression



spring in the grease cup, creates the impulse to discharge the grease to the bearing. A floating reservoir cup shows the level of the grease in each unit. When the cup rests on the feeding fitting, the lubricator should be refilled. For further information please mention PEE No. 491 in your request.

Hydraulic Bundling Press

Earll Mfg. Co. recently announced the Model EB-100 hydraulic and self contained bundling book press. The EB-100 Bundling



Press is operated by a hydraulic mechanism and motor with suitable controls. The hydraulic mechanism provides 24 hr. operation without overheating, states sponsor. Included as standard equipment are rods which fit between the platens for bundling books of various sizes plus an extension back block for small quantity bundling. Height is 46 in., width 17¼ in., length 79 in., 12 in. stroke, ram travel 12 in. per sec. and 10½ in. by 10½ in. platens. Press is operated by a standard 1 h.p., 3 ph., 220-440 v., 60 cy. electric motor. For further details, please mention PEE No. 410 in your request.

Packaged Air Conditioners

Packaged air conditioners that do not require floor space have been introduced by the General Electric Co. The horizontal

Get More and Better Quality Proofs with these Power Driven Galley Presses

Vandercook 23 "Safe Electric"
Bed Size 15" x 26" — Maximum Form 14" x 26" — Floor Space 3' x 4'9"

Vandercook 22 "Economy Electric"
Bed Size 10" x 25½" — Maximum Form 8" x 25½" — Floor Space 1'11" x 3'8"

If you are looking for more efficient, more economical production of galley proofs, either of these high speed electrical machines is your answer. Both deliver clean, sharp proofs of good quality. Both are easy to operate and safe — with adjustable speeds up to 40 proofs a minute.

Write for information regarding the Vandercook 23 and 22 High Speed Electric Galley Proof Presses — and our current Illustrated Price List.

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VANDERCOOK *Maximum Makeready System*

SPARTAN

PERFORATOR TAPE

For Your

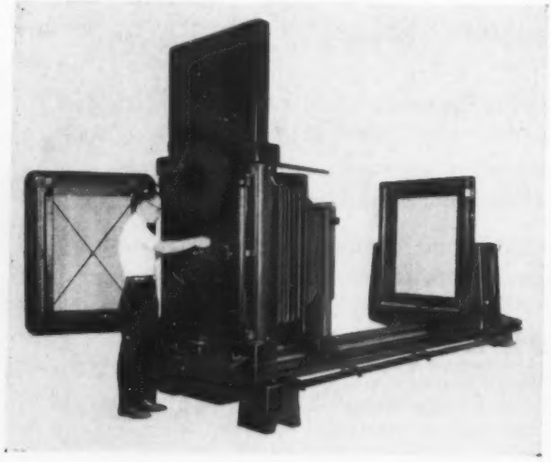
TELETYPESETTER

EQUIPMENT

Link Paper Company

220 BROADWAY • NEW YORK 38, NEW YORK

line, designed to be suspended from the ceiling or shelf-mounted, includes water and air cooled models. Developed by G-E's Commercial and Industrial Air Conditioning Dept., the units are available in 3, 5, and 7½ T. capacities. Commenting on the new models, G. K. Iwashita, general manager of the G-E Dept. said, "Shortage of floor space is a chronic illness of almost any industrial enterprise . . . the factory manager needs his floor area for machinery, aisles, and work in process." The water cooled units are equipped with a hermetically sealed condensing unit and the lubricated motor, compressor, and condenser are permanently sealed in steel. Mountings are resilient and larger fans are used for sound reduction. The unit is painted ceiling gray. Air cooled models are equipped with grilles at the bottom and sides of the unit through which return air enters. On water cooled models, air enters at the rear. An automatic electrically activated muggy weather control has been added for humidity regulation. Accessories include a heating coil which can be used with steam or hot water and a three way directional air distributor for air delivery within the conditioned space. For further details, please mention PEE No. 492 in your request.



Masking Camera—Robertson Photo-mechanix, Inc. announced the Mask-O-Matic camera for masking and copying work in the making of color separations. The camera provides a glass screen mechanism in which masking bars can be mounted, while a halftone glass screen is placed in a second screen mechanism, mounted either on the plate holder or the film holder, permitting direct masking and simultaneous halftone screening. When used for regular copying work, the glass screen is mounted in the regular screen mechanism which is automatically adjustable for positioning a compensating glass near the focal plane. The Mask-O-Matic is available in two models, one with a manual cable drive and the other with machined electric screw drive. Both drives are furnished with a resetting device. Other features are: oscillating positive holder mounted on the reversible copyboard; electric lensboard movement controlled from the darkroom; a one piece bellows which contracts to a minimum distance; percentage focusing system, with re-registration to .001 of an inch; off the floor type lamp carriers; vacuum film holder, controlled with a calibrated valve selector in standard film sizes; and three point registration system on the positive holder and the plate bars. For further details, please mention PEE No. 404 in your request.

Adhesives for Engravings

A saving of 3 min. per halftone is claimed through use of Pliobond, an adhesive for

mounting photoengravings on wood base. Halley E. Eisinger, superintendent, Akron (O.) Engraving Co., cites such savings in use on zinc, copper and magnesium engravings. Made by Goodyear Tire & Rub-

● Yes sir, even the experts consult the "Yellow Pages" in P.E.E.'s Annual "Where to Buy" Reference Issue. Men in charge of plant operations, involving millions of dollars' worth of equipment, find the consulting of P.E.E. "Yellow Pages" very valuable and instructive.

● Questions regarding equipment for the various departments of the plant such as Trade Names, Press Specifications, or the location of a certain manufacturer, supplier or dealer, are all answered in the P.E.E. "Yellow Pages".

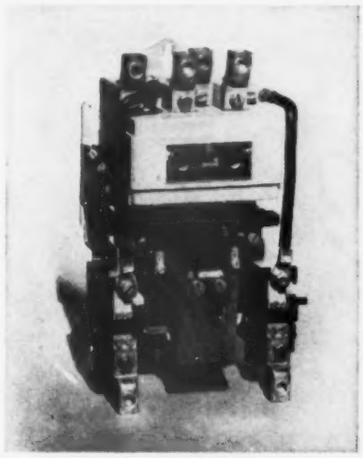
● Join the thousands of printing plant experts who for 22 years have been saving time and money by making it a habit to consult the "Yellow Pages" for information about equipment and supplies.

"WHERE TO BUY"
Printing Equipment and Supplies
Reference Issue
a few copies left — $2.50 each

ber Co., Pliobond gives a hard film 0.004 in. thick. The sponsor claims it checks corrosion and minimizes the possibility of cuts slipping while on the press. Pliobond is brushed onto the metal as in the photo above after the engraving has been cleaned of oxide, shellac, asphaltum or oily film. For further information, please mention PEE No. 471 in your request.

Magnetic Starter

A vertical lift magnetic starter, designed for motors of up to 100 h.p. rating, has been announced by the General Electric Co.'s General Purpose Control Dept. Strongbox coil design includes a cast on plastic case for protection of coil windings. A permanent



air gap causes the starter to drop out when de-energized, and a bi-metallic relay provides overload protection. Suitable for operation of polyphase motors in ratings of 220 v., 50 h.p. and 440 to 550 v., 100 h.p., the starter is available in reversing, multi-speed, and combination forms, and can be obtained with either vertical or horizontal mechanical interlocks. For further details, please mention PEE No. 487 in your request.

Machine Applies Adhesive

Williamson Adhesives, Inc.'s machine, the Tapemaker, has been developed to pro-

duce pressure-sensitive tape at the point of use for immediate application. Designed for large scale operation, the machine can be installed on the production line to handle such taping operations as sealing, labeling, packaging, binding, strapping and wrapping, states the company. The current

PAPER SAVING THE CHASE *and* R.O.P. COLOR

● Your chases should be checked CAREFULLY.

INCREASINGLY GREATER ACCURACY in moulding newspaper pages is demanded of the Stereotype department when column or column rule width is changed so as to print on narrower or wider paper. This is also true when R.O.P. color mats must be moulded to fit your casting equipment.

Much time can be lost and a poor printing job produced if the Stereotyper has to work with mats that are made from faulty chases.

The chase is a piece of stereotype equipment and must have bolsters and/or lines to the proper specifications to work with the casting box.

AMERICAN STEEL CHASES give the maximum in strength and durability. They are manufactured carefully to meet every requirement of the composing room as well as the Stereotype department.

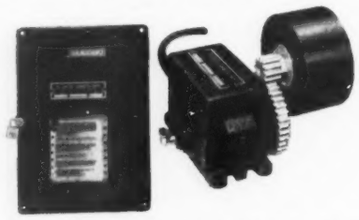
Contact us through your local dealer. Your chases may need only slight corrections for your page size change. A call on us may save you time and money! Only accurate chases can give you accurate mats!

AMERICAN STEEL CHASE CO.
31-31 48th Avenue • Long Island City, N. Y.

model Tapemaker handles tape from ¼ in. to 3 in. wide. Adhesive may be applied to a variety of materials such as cloth, paper, impregnated stock, films, foil, cellophane and printed surfaces. Tape materials in roll form and adhesives are supplied by the sponsor. For further details, please mention PEE No. 470 in your request.

Electric Tachometer

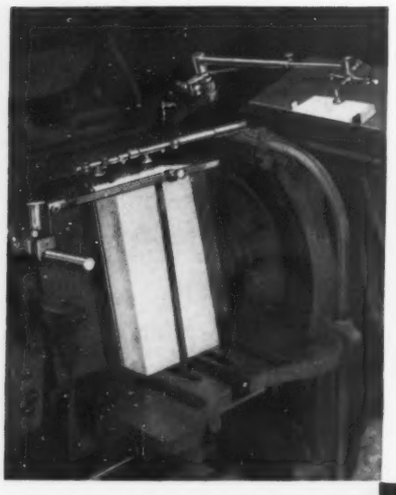
A rate recorder, announced by The Electric Tachometer Corp., makes permanent records of speed or production rates and totalizes the production units on an integral counter. In the Graphic Arts industry, the Tetco Type R-500 Recorder is used for counting and recording the production of newspaper presses and recording breaks in paper during processing, giving a log of speed, starts, and stops as related to time of occurrence. Controlled by a rotary contactor and electric clock, the recorder gives visual information for control or maintenance purposes, and provides



a recorded basis for analysis of production, breakdown causes and speed tolerances. The recorder chart may be calibrated in any function of speed such as r.p.m., ft. per min., papers per min., miles per hr. and pieces or packages per min. or per hr. The chart is wax coated and inscribed with a carboloy stylus. The contactor, mounted on the machine, requires low torque and can be driven in ratio to production through spur gears, chain and sprocket, or by friction contact with the moving product. The accuracy of the recorder is independent of machine vibration or wear, electric supply voltage, or length of connecting leads. A chart coding device can be used to record causes of breakdowns or stoppages or what product was moving through the machine at a given time. For further information, please mention PEE No. 408 in your request.

Fire Fighter

A fire preventive container can be made from any used 55 gal., 30-gal. steel drum or standard corrugated trash can by tightening a wing nut, says Protectoseal Company. The wing nut would tighten the band attached to a Protectoseal Thermo-Acting Drum Cover. That is a steel stamping formed to fit snugly over the edge of the types of containers mentioned above. A spring plunger unit containing a low melting point fusible link is incorporated in the cover hinge. Fire inside the container or outside melts the link, releases the spring-loaded plunger and closes the cover. A new link can be quickly placed in the unit, says the manufacturer. A thermo-closing pail



THE C&P NEW
Craftsman
WITH SIDE DELIVERY
10 X 15 12 X 18
HANDLES SMALL SHEETS
AND ENVELOPES

On the NEW C & P Craftsman Automatic sheets as small as 1⅞″ x 3⅜″ (No. 88 card) and envelopes may be fed automatically just as readily as large sheets.

Notice in the photograph above how the slot in the feed table and the long arm extending downward hold the small sheets in place, so that the full 14-inch capacity of the feed table is utilized. The feed table holds a full box of envelopes. Practically any type of envelope may be printed since a special feed table for died-out envelopes is furnished as an extra.

NEW SIDE DELIVERY
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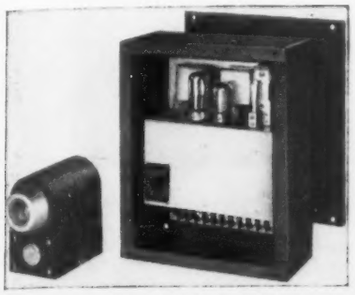
cover gives the same type of protection to any 11-in. used pail. For further information, please mention PEE No. 478 in your request.

Sheet Registration Cutoff Control

Photoswitch Control Type 23LF3, Model 1006, a registration cutoff control which operates continuously over both high and low speed ranges without special attachments, has been announced by Photoswitch Division, Electronics Corp. of America. Designed for maintaining accuracy in automatic cutoff operations such as are used in packaging machines, or to regulate intervals in collating machines, this control responds to the appearance of a mark printed on



material moving past at speeds from 15 ft. per min. to more than 500 ft. per min. The change in light intensity caused by the passage of this mark actuates the control relay which will speed correction devices, keeping the material in synchronization with the machine operation. The circuit will respond to impulses as short 0.005 sec., relay energizes within 0.012 sec. and relay de-energizes when the correction is made within 0.012 sec. The scanner consists of a light source, lens system, phototube and amplifier tube, mounted in a single housing. The lens system is used for both incident and reflected light. It is prefocused to minimize optical alignment at the installation. For further details, please mention PEE No. 459 in your request.

Skid Resisting Covering

A nonskid plastic abrasive composition called Ferrox will cover 40 ft. to the gal., says the maker, American Abrasive Metals

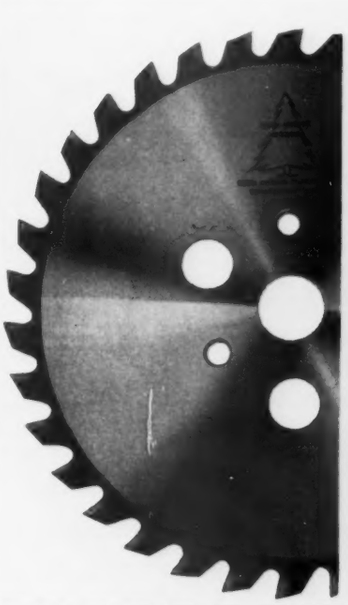
Co. Ferrox helps assure nonslip grip by resisting oil, chemicals and weather conditions. It's suitable for such areas as concrete floors in washrooms, ramps, platforms and around machines. For further information, please mention PEE No. 473 in your request.

NEWS ITEMS

Gravure Meeting—The annual business meeting of Gravure Research, Inc., will be held at the Drake Hotel, Chicago, on Tuesday morning, June 14, it has been announced by T. J. Stulz, president. The group's Technical Advisory Committee will meet on Monday morning, June 13, at the Drake to discuss progress and forthcoming projects. The board of directors will hold a dinner meeting at 6:30 p.m. Monday, June 13.

MONACO

Monaco Joins Hughes — Russell C. Hughes, president of the Hughes Corporation, recently announced that Dwight L. Monaco has joined the organization as vice president and will serve in management and sales. Monaco comes from the McGraw - Hill Publishing Co. with which he has been associated for more than 10 years, most recently as assistant vice president and director of manufacturing of the Production Division. The Hughes Corporation, which specializes in publication printing, has com-



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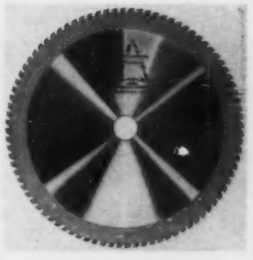
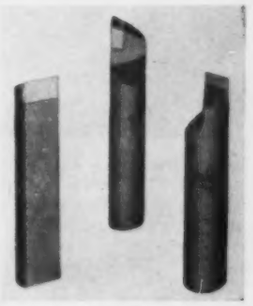


Immediate Delivery



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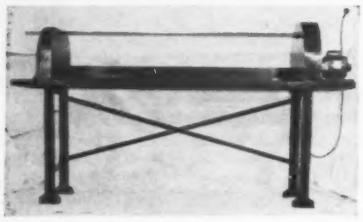

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LITERATURE ON REQUEST

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plete plants in five cities. Monaco will have headquarters in New York, N. Y. As a member of many Graphic Arts groups, Monaco has been especially active as an executive officer in the Research and Engineering Council of the Graphic Arts Industry.

Harris-Seybold Displays—Harris-Seybold Co. will be one of the exhibitors at the Tenth Intl. Printing Machinery & Allied Trades Exhibition (IPEX), to be held in London, July 5 to 16, 1955. Harris-Seybold's exhibit will be at the stand of Smyth-Horne Ltd. of London, the company's British distributors. On display will be a two color 23 in. by 36 in. Harris offset press; a 65 in. Seybold automatic-spacer cutting machine; and a Macey Collator, an automatic gathering machine. Representatives of Harris-Seybold's sales and service department will be in attendance.

Boys in Blue—The St. Petersburg (Fla.) *Times* engravers are now wearing blue work uniforms. Three sets of cotton twill uniforms were given by the *Times* to each of the 12 engravers. The two piece uniforms feature a safety designed short sleeve shirt with each engraver's name embroidered in gold on the front. The *Times* signature appears on the back. The presentation is part of a program to outfit personnel in four mechanical departments, the building maintenance department, and the circulation mailroom, announced Alvah H. Chapman, jr., general manager. Pictured are (from left to right): Fred Ulrich, engraving chief of the *Times*; Bill Park, night engraving chief; Fontaine Waller, relief cameraman; Jack Verbanatz, Dow Fast-Etch operator; Stan Bedient, Dow Fast-Etch chief; Keith Ellington, Dow Fast-Etch operator; Jean Thomas, printer, and Hayden Thomas, router.

Promotion of J. William Donnelly to sales engineer, letterpress products, Printing Products Division, has been announced by Minnesota Mining & Mfg. Co. Donnelly will headquarter at 3M's Chicago office.

Cullom & Ghertner Election—John Talton, former estimating supervisor, Cullom & Ghertner Co., was elected to the office of secretary at the annual meeting of the board of directors, it was announced recently by Pres. Alven S. Ghertner. Talton has been employed by Cullom & Ghertner Co. for five years, starting as a compositor, and promoted successively to estimator, supervisor, and more recently office manager.

TALTON

Plant Expansion—Plans for expanding its ink plant in Clearing, Ill., into one of the larger inkmaking facilities in the world have been announced by General Printing Ink Co., Div. of Sun Chemical Corp. The ink plant, which now occupies 98,000 sq. ft. of space on a 10 A. site in the Chicago suburb, will be enlarged to 123,000 sq. ft. About $350 thousand will be spent for this expansion, says Ralph C. Persons, president of Sun Chemical.

Fairchild Sales Appointment—Douglass C. Smith has been appointed sales representative for Fairchild Graphic Equipment, Inc., it was announced by Chandler Abbott, eastern district manager. Smith will handle sales of the Scan-a-graver and associated

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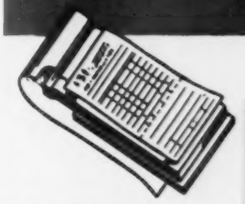

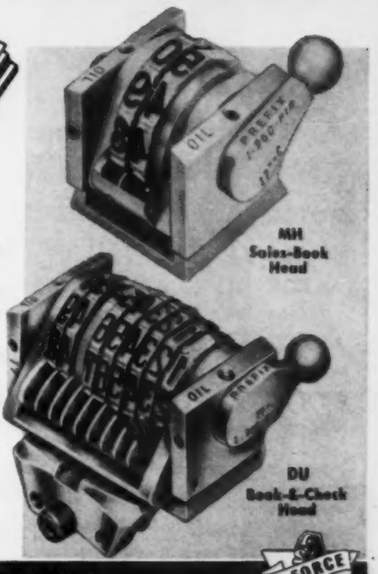

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HALL

Hall Appointed to Sales—Thomas H. Hall has joined the Chicago sales staff of Ideal Roller & Mfg. Co., according to a recent company announcement. Hall, a former U. S. Air Force photography technician, comes to Ideal with four years of offset camera and platemaking experience. He will sell Ideal products in the company's Northern Illinois territory.

Deceased—Frank J. Deutsch, former manager of supply order section, Mergenthaler Linotype Co., died May 1. Deutsch had been with Mergenthaler for 36 years, joining the company in 1919 as a stock clerk. He is survived by his widow, the former Rose Voltz.

Honor Society Inducts—Fred J. Hartman, educational director emeritus, Intl. Graphic Arts Education Assn., was honored by Gamma Chapter, Gamma Epsilon Tau, New York City Community College, recently in Brooklyn, N. Y. The affair was the annual induction meeting and ceremony. Twenty-five new members were inducted into this international society of collegiate Graphic Arts students. This group is now known as the Fred J. Hartman class. Main speaker for the meeting was Harry Sloane, production manager, New York (N. Y.) *Daily Mirror*. Samuel M. Burt, executive secretary of IGAEA, performed the ceremonial duties and awarded gold society keys to the charter members who were present.

Scan-a-sizer Showing—The Fairchild Graphic Equipment, Inc. Scan-a-sizer, an electronic enlarging or reducing halftone engraving machine, will be shown for the first time outside the United States at the Intl. Printing Machinery and Allied Trades Exhibition in London, England, July 5 through 16. The machine will be displayed in the booth of J. F. Crosfield, Ltd., Scan-a-graver dealers in the United Kingdom. In addition, a 65 screen Standard Scan-a-graver and the Variable Response Unit will be exhibited.

MAHA

Link-Belt Appointment—Arthur E. Maha has been appointed sales manager of the Link-Belt Co. Dodge Plant in Indianapolis, Ind., where the company's line of ball and roller bearings are made. Maha is a mechanical engineering graduate of Purdue University and has had experience in design and sale of bearings.

Los Angeles MPS Adopts Wage Rates—Los Angeles open shop employers voted to adopt new Recommended Wage Rates and Working Standards, effective March 1, 1955, to March 1, 1956. Decision was made at the annual meeting of the Master Printers Section of Printing Industries Assoc., at Rodger Young Auditorium. Revisions include increased wage rates and liberalization of holiday pay. Also adopted were several policy measures affecting employer-employee relationships. MPS officers elected March 9 are: Ed Male, Male & Stanton, chairman; Ace Adams, Ludlow Composition Co.; Scott Mattraw, Hillside Press; Harrison Chandler, Time-Mirror Press; O. T. Hamilton, North Hollywood Printing

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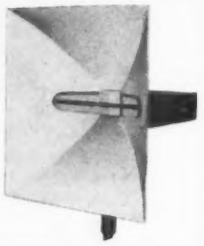

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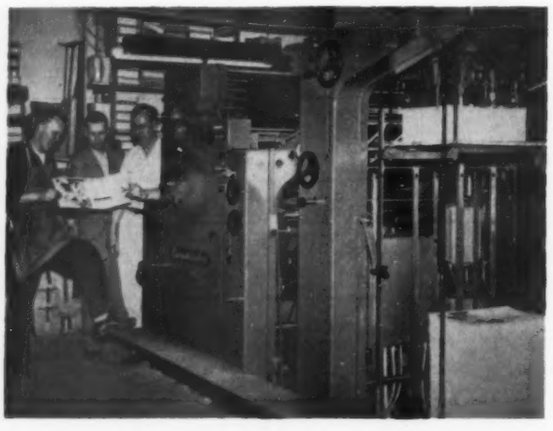
& Stationery; Doug Daley, Joe Daley & Sons; Bill Dankers, William J. Dankers Co.; Art Ferguson, Kellaway-Ide Co.; Ray Smith, Bookman Press; Phil Ellsworth, Charles R. Hadley Co., ex-officio member; and Andy Forbis, secretary of MPS.

Newly Elected Officers of Sta-Hi Corporation, named at the annual board of directors' meeting, are: Craig C. Baker, president; O. T. Cochran, secretary and sales manager; Leland H. Satre, vice president, engineering; R. W. Turner, vice president, manufacturing, and Lee Yake, treasurer. Satre was elevated from his former position as chief engineer. Yake was formerly assistant treasurer. Cochran assumes the duties of sales manager in addition to his post as secretary.

European Trip—Phil Smit, executive vice president, Lutz & Sheinkman, and president, Metropolitan Lithographers Assoc., is going to Europe for a four week trip. Smit will visit England, Germany and Italy, studying printing operations and investigating possibilities of importing specialized printing equipment.

Pearl Press Installed—First installation on the West Coast of the Consolidated Pearl, a Swiss built offset press, was made at Postal Litho-Print Service, Whittier, Calif., as announced by Consolidated Intl. Equipment & Supply Co. The Pearl press is an 18¼ in. by 24¾ in. press with a pile height of over 43 in. and a production speed of up to 8000 sheets per hr. Features of the press are a Nylon brush ductor and an electronic eye register control. Adjustments are handled from outside the press. A feeding mechanism can be adjusted to handle 6 lb. tissue to 12 ply card stock.



Pictured by the recently installed Consolidated Pearl are (from left to right): Roger Anderson, pressman; Ralph F. Peck, plant owner, and Lawrence E. Smith, plant superintendent. Other recent installations of Pearl presses are: Two presses, Hub Offset, Boston, Mass.; Murray Printing, Wakefield, Mass.; Commonwealth Press, New York, N. Y.; Shandling Lithographing Co., Tucson, Ariz.

Build Safety

(Continued from Page 74)

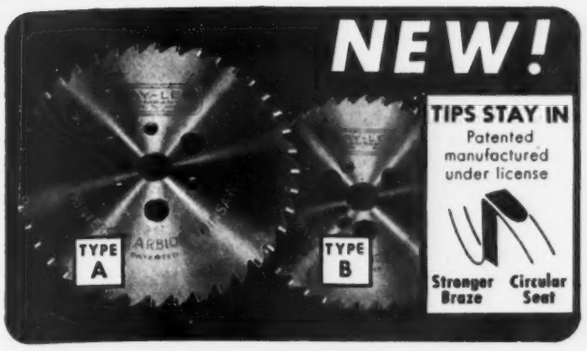
and machine. If it is to fulfill its highest purpose, the planners must also attempt to project development and demands of the business as far as is possible into the foreseeable future. Equal consideration to aisles and to the flow of work along them must be given.

Roller and Tool Rack Provisions

The handling of press rollers and tools results in many accidents which can be avoided through advance planning. Roller racks and tool racks are essential at each press and should be treated in planning as indispensable ancillary equipment. Similar provisions for tools is necessary wherever they are kept and used. Likewise, adequate cabinet and shelf space near each machine and at any other points where small items may accumulate keeps them off table tops and floors and improves the safety of working conditions.

Watch Truck Handling

Improper handling and storage of trucks can result in frequent injuries. It is interesting to note that a large number of accidents occur when trucks are temporarily not in use and are parked in areas where they constitute obstructions to spaces which are ordinarily clear. It



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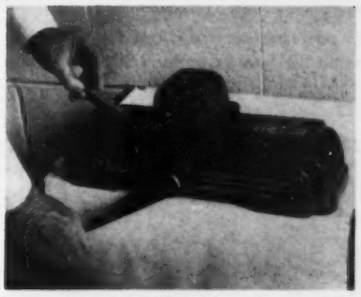

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is an important matter to provide officially designated parking areas for trucks and to take measures to assure that they will be kept in those spaces when not in use.

Toxic Fumes

Toxic fumes can be hazardous wherever metal is melted for type-casting or for the making of press plates. They are also encountered in the making of photoengravings and offset plates. Provision for proper venting with either updraft or down-draft as may be dictated by the nature of the fumes, can be made readily when a new plant is planned. Similarly, ventilations of areas in which solvents are used for cleaning purposes is seldom difficult if taken into account during the planning stage.

Plant Illumination

Proper plant illumination is imperative in reducing the rate of accidents. One experienced in making plant layouts will constantly bear in mind the ease with which lights can be installed at proper points. He will guard against shadow areas requiring special and expensive arrangements. Uniform lighting throughout all areas, with avoidance of light and dark spots, is extremely important in enabling workers to move about with safety. Most of the need for localized lighting of the spot variety can be avoided through advance planning.

Escape Routes in Case of Fire

Fire hazards can be greatly reduced through forethought at the time when planning is being done. When working on a plant layout an experienced person will almost subconsciously avoid recessed areas from which quick escape would not be possible in two entirely different directions in the event of sudden fires. If desirable, smoking areas can be designated and can be located within safe surroundings. Fire-fighting equipment will be included in carefully prepared layout. Fire doors will be provided for ink rooms or other areas in which highly flammable materials are stored and handled.

Color Schemes

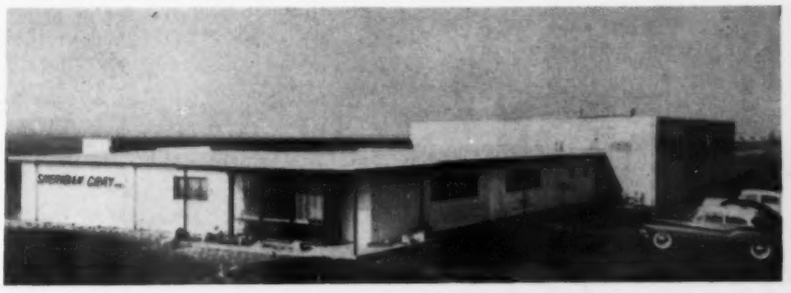
The color scheme of a plant is, of course, important. Any one of the plans for color designation can be best adopted uniformly within a new layout.

First Aid Station

Basic to the planning of a plant is provision for first aid. The location of such facilities will be properly planned in relationship to ready access by the working force as if a part of the flow of work.

Cleanliness

A new plant layout makes possible not only orderliness but cleanliness. The latter quality is in itself an important safety factor not only in helping to avoid accidents but also in promoting general health. Cleanliness extends particularly to floors and the prevention of slippery spots which can result in falls. Many of the materials now available for building safer surfaces on floors can be best applied before a new plant is occupied.



Sheridan-Gray, Inc. recently moved into its newly erected quarters in Torrance, Calif. Sheridan-Gray is the design and development division of T. W. & C. B. Sheridan Co., manufacturers of printing and binding equipment. The one-story building is 10,000 sq. ft. overall including a 4000 sq. ft. shop area. It is located on the northeast corner of a 3½ A. tract adjacent to the Torrance Municipal Airport.

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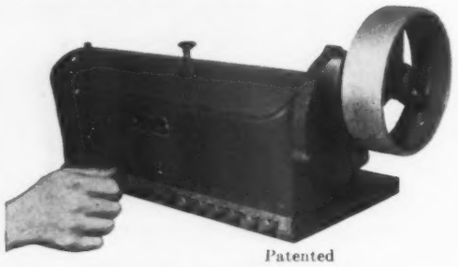

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Short-run, 3-color Printing

(Continued from Page 72)

phasized as the best guarantee of success by John W. Gosling, Kodak Research Labs. "Artificial compensations such as handwork on plates or changing of press or inks to suit a specific picture," he stated, "must be absolutely ruled out." The LTF sensitivity guide or a similar step wedge is an aid to tone control.

"Another key to cost reduction is the automatic register of all images," said Gosling. Pin register systems are used for original, mask negatives, plates, and press cylinder. Because of this, the press can be operated for several weeks without adjustment of register.

With the aid of pairs of reproductions thrown on the screen, Warren L. Rhodes of RIT discussed evaluation of the final reproduction.

Other speakers were: H. B. Archer of University Microfilms, Ann Arbor, Mich.; Dr. Mark Ellingson, president of RIT and Ralph M. Evans, director of Kodak's Color Technology Div.

On the second day, Herbert Morrow of RIT acted as coordinator. He introduced V. L. Gardner of the Lithochrome Corporation, Erie, Pa., who discussed profit planning for the three-color system. "We are not using three-color as a substitute for high-quality four-color printing," he said. "Rather, we are opening a new market by selling three-color to those who have previously used one or two colors in illustrations."

Lester E. Goda of Kodak's Graphic Reproduction Sales Div. presented slides showing many items of equipment suitable for printing. Two firms offer color-separation cameras. The three color process camera made by Douthitt Corporation is handled by the Short Run Color Corp., Detroit. The Photostat-Microtronics camera is manufactured and sold by the Photostat Corporation. It is distributed also through the Princeton Polychrome Press, Princeton, N. J.

Morrow moderated discussion of organization, management, and sales in a three-color installation. For effective operation, it should be observed that a single separation camera can provide negatives for several presses. Opinion among the panel members varied as to the number of presses with which a new installation should be supplied. Business could be started with one press or with about three, depending on anticipated volume. Minimum investment for a new business is around $25 thousand, it was stated.

Warren L. Rhodes of RIT, speaking on current and future developments in three-color work, called attention to the need for imagination in using new techniques for automatic control of processes.

IPI Cincinnati Plant—Interchemical Corporation, Printing Ink Div., has announced the purchase of a plant with a 10 A. site in Cincinnati for conversion to an ink factory. The plant will serve the Ohio Valley and the South and is slated to begin operations by the fall of this year. The new plant will have some 80,000 sq. ft. of production, laboratory and administrative space. A two story office unit is included in the plans. Immediate supervision of production will be under Edward A. Kalmar, IPI Cincinnati factory manager. A tank farm with pumping systems is to occupy a part of the 10 A. site. Loading docks, a railroad siding and parking areas are also planned.

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BOOKS

Printing Processes Seminar

PRINTING Processes Seminar of the 16th Annual Forum of the Packaging Institute is a stenographic transcript of talks originally published in the proceedings of that forum. "This is the only complete printed exposition of the merits of each of the four methods of package printing," says Frank W. Cray, chairman of the seminar and vice president, Printing Ink Div., Interchemical Corporation. Copies are available at $2.25 each from the Packaging Institute, 342 Madison Ave., New York 17, N. Y.

Lanston Monotype Seeks Customer Cooperation

The Monotype Users Association was formed and organized recently. It has been announced that as of Jan. 1, there were 143 dues-paid members. Of these, 79 are members of the ITCA, which Monotype owning plants total 93. There are 19 ATA members, 44 PIA members, and 34 with no trade affiliation. The purpose of the association is to further cooperation between the Lanston Monotype Corp. and Monotype users so that they may obtain full utility of the equipment as well as to supply current type face requirements. Subsequent to organization three MUA committees submitted suggestions to Lanston. The machine manufacturer then sent a questionnaire to MUA members regarding suggestions which had been submitted in the MUA committee reports. The questionnaire sheet bearing 11 suggestions was arranged in ballot form with spaces for indicating non-interest, interest and whether or not each member would order the matrices or other equipment in the event there is demand enough for each product.

Lanston Monotype Corp. also reports that many of the suggestions offered by MUA committees already are being integrated into Monotype practice. The company also states "Decisions regarding new type faces, the addition of point sizes to faces now available, and modification of present faces, will await discussion with Monotype users." The three MUA committees mentioned above are concerned with technical, typographic

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Harris TRG, 45 x 65" two-color, as is	76,000

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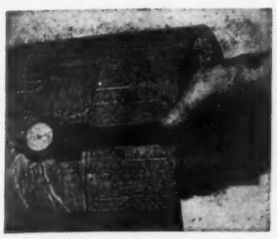

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and promotion matters.

All Monotype users are invited to affiliate themselves with the Monotype Users Assoc. The first issue of *MUA News Letter* is edited by F. W. C. French and consists of four pages.

Bullard's Alphabets

Ralph Specce, president of Howard O. Bullard, Inc., 150 Varick St., New York 13, N. Y., recently announced publication of a comprehensive type book called *Bullard's Alphabets*. This 536 page book, page size 12 in. by 9 in. oblong, bound in a rigid overhanging loose-leaf binder, contains body and display types—over 2200 different fonts. The various types are shown in specimens and complete alphabets from 4 pt. to 144 pt. of Linotype, Monotype, Ludlow, foundry type, ornaments and decorative material, as well as over 50 photo-lettering styles. In addition there is a section of copy preparation, copy fitting, proofreader's marks, etc. A typewriter face gauge at the foot of each page aids copycasting. The pages may be snapped in and out for tracing or comparison. The book will sell for $35 including a seven ring binder and protective carton.

Stereo Color Plate Truck—While curved stereotype plates weigh around 50 lbs. each, and they do seem rather cumbersome, yet they must be handled carefully to avoid damage in handling, particularly with respect to the printing face. In the case of sets of color plates, of course, it is advantageous to store them collectively. Mechanical Supt. Harry A. Miller, of the Dayton (O.) *Daily News*, sends to us a photograph of one of the trucks in use in his plant which is shown in the accompanying illustration. He explains that the truck is patterned after the pie trucks used in most bakeries. The channel iron rails, spaced properly with respect to height and width, eliminate necessity for makeovers and routing new plates. In the instance of the *News*, capacity of the truck is four sets (two up) of color plates. The truck is mounted on special steel swivel casters to permit moving easily from one location to another. A jack brake prevents movement of the truck when in loading or unloading position. Miller reports the cost of the truck was less than $200

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Literature for Asking

(Continued from Page 90)

for the packaging field. Subjects include carton sealing glues, case seal glues, bottle label glues, round container labeling glues, resin emulsion adhesives and wrapping and bundling adhesives. A data sheet enables users to describe an operation and obtain laboratory recommendations for the proper adhesive. For a copy, please mention PEE No. 288L in your request.

Miscellaneous

INDUSTRIAL pH METER

An industrial line operated pH meter, Model I, is described in a three page letterhead type publication by Cambridge Instrument Co., Inc. With the instrument, pH determinations of sample test solutions or the contents of vats and tanks at various states in a production process can be taken. The third page of the letterhead contains an illustration of the meter with electrode door both open and closed. For a copy, please mention PEE No. 281L in your request.

INCANDESCENT LAMPS

A 12 page bulletin in which are contained descriptions of the physical, electrical and operating characteristics of incandescent lamps, was recently announced by Westinghouse Lamp Div., Westinghouse Electrical Corp. In the bulletin are shown basic diagrams of parts of the lamps and steps in the manufacture of a lamp. One page is devoted to technical data charts regarding representative standard-voltage filament lamps. For a copy, please mention PEE No. 282L in your request.

GRAPHIC ARTS EQUIPMENT

An eight page booklet, *Directory of Equipment for the Graphic Arts Industry*, has been made available by the Harris-Seybold Co. Features of the booklet are full color illustrations depicting printed material and photomicrographs of offset, letterpress and gravure color process printing, magnified 100 diam. The lines of Harris presses, Seybold paper cutters, and Cottrell presses are listed and illustrated. For a copy, please mention PEE No. 283L in your request.

TRANSPARENT FILM ADHESIVES

A 22 page booklet has been made available by National Adhesives, Div., National Starch Products, Inc. Included in the booklet are descriptions of the various types of adhesives and their uses with transparent films. In a pocket at the end of the booklet is a chart of commonly used transparent films describing properties and characteristics and listing their manufacturers. For a copy, please mention PEE No. 284L in your request.

EQUIPMENT CATALOG

William Recht Co., Inc. and Gaetjens, Berger & Wirth, Inc. recently issued a 38 page supply catalog containing specifications of their equipment for the art room and platemaking departments; the pressroom and the plate graining department. Sections on small offset press supplies and Harris Lith chemicals are also included. For a copy, please mention PEE No. 285L in your request.

FORK TRUCK FOLDER

A four page folder in which are illustrated and described its Type F-39T8, 8000 lb. capacity electric powered fork truck has been published by The Elwell-Parker Electric Co. The folder contains numerous illustrations and one page is devoted to design specifications. For a copy, please mention PEE No. 287L in your request.

PLANT LAYOUT EQUIPMENT

A catalog and price list has been released by Visual Plant Layouts Inc. of its 3-dimensional scaled planning materials. Items described include Lucite planning models of your buildings, production machines, non-production equipment such as workbenches and assortments of operators, both male and female. The 16 page price list accompanies the 50 page catalog describing over 5000 stock models. For copies, please mention PEE No. 289L in your request.

LETTERHEAD DESIGN

An eight page letterhead design manual, containing examples of letterheads in a pocket, has been released by Parsons Paper Co. The manual was designed and written by Lester Beall, designer and consultant art director. In it are contained qualifications of good letterhead design, and descriptions of the various Parsons bonds, writings and document papers. For a copy, please mention PEE No. 292L in your request.

ANNUAL REPORT

The 40 page annual report of The Mead Corporation was recently released. Contained are financial highlights of the company, financial statements and a description of its national operation. The well illustrated report is printed by offset on Mead papers. For a copy, please mention PEE No. 293L in your request.

ELECTRONIC pH METER

The Photovolt Corporation has issued a four page bulletin descriptive of the Photovolt Line-operated Electronic pH Meter, Model 110. The Meter, used in laboratory and plant, is described and illustrated in the bulletin. A price list of parts and accessories is included. For a copy, please mention PEE No. 294L in your request.

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Conference Dates

(With Organization Name and Principal Officer)

American Photoengravers Assoc. — 1955 Conv., Waldorf-Astoria Hotel, New York, N. Y., Oct. 10-12. Exec. Secy. Frank J. Schreiber, 166 W. Van Buren St., Rm. 430-A, Chicago 4, Ill.

ANPA Mechanical Conf. — 1955 Conf., Edgewater Beach Hotel, Chicago, June 6, 7, 8. Mgr., ANPA Mechanical Dept., Richard E. Lewis, 370 Lexington Ave., New York 17, N. Y.

Book Manufacturers' Institute—1955 Conf., The Greenbrier, White Sulphur Springs, W. Va., Oct. 13-15. Secy. Miss A. G. Watson, 25 W. 43rd St., New York 36, N. Y.

Fifth District Craftsmen's Conf. — 1955 Conf., Netherland-Plaza Hotel, Cincinnati, Aug. 6. Secy.-Treas. Dave Walker, Adm. Asst., Graphic Arts Assoc. of Michigan, 320 W. Lafayette St., Detroit 26.

Graphic Arts Trade Assoc. Executives — Secy.-Treas. Arthur L. Johnson, Graphic Arts Assoc. of Milwaukee, 704 W. Wisconsin Ave., Milwaukee 3, Wis.

Gravure Technical Assoc. — 1956 Annual Meeting, Hotel Biltmore, New York, N. Y., Feb. 1-3. Secy. Len S. Pinover, Room 4800, 30 Rockefeller Plaza, New York 20, N. Y.

Great Lakes Newspaper Mechanical Conf. —1956 Conf., Schroeder Hotel, Milwaukee, Wis., Jan. 29, 30, 31. Secy.-Treas. Don Clark, Stereotype Supt., Grand Rapids (Mich.) *Press*.

Illinois Newspaper Mechanical Conf. — 1955 Conf., Leland Hotel, Aurora, Ill., Sept. 24, 25. Secy.-Treas. Wilbur Augsperger, Peoria *Journal-Star, Inc.*, 119 So. Madison St., Peoria 2, Ill.

Intl. Assoc. Electrotypers & Stereotypers —1955 Conf., Shoreham Hotel, Washington, D. C., Oct. 19-22. Exec. Secy. A. P. Schloegel, 701 Leader Bldg., Cleveland 14.

Intl. Assoc. of Printing House Craftsmen —1955 Conv., Netherland-Plaza Hotel, Cincinnati, O., Aug. 7-10. Exec. Secy. Pearl E. Oldt, Rm. 806, Transportation Bldg., 307 E. Fourth St., Cincinnati 2, O.

Intl. Graphic Arts Education Assoc.—1955 Conv., Carnegie Institute of Technology, Pittsburgh, Pa., July 3-8. Exec. Secy. Samuel M. Burt, 719 Fifteenth St. N. W., Washington 5, D. C.

Intl. Printers Supply Salesmen's Guild—1955 Conv., Netherland-Plaza Hotel, Cincinnati, O., Aug. 7-10. Secy. Myron F. Lewis, 608 S. Dearborn St., Chicago 5.

Intl. Typographic Composition Assoc. — 1955 Annual Conv., Hotel Claridge, Atlantic City, N. J., Sept. 7-10. Secy. Frank M. Sherman, 1015 Chestnut St., Philadelphia 7.

Iowa Daily Newspaper Mechanical Conf. Secy.-Treas. Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald*.

Kansas-Missouri Newspaper Mechanical Conf. — 1955 Conv., Town House Hotel, Kansas City, Kan., Sept. 10, 11. Kansas Secy.-Treas. Larry Miller, Kansas Press Assoc., 701 Jackson St., Topeka, Kan. Missouri Secy.-Treas. William A. Bray, Missouri Press Assoc., 220 Walter Williams Hall, Columbia, Mo.

Lithographers National Assoc. — 1955 Conv., Lake Placid Club, Lake Placid, N. Y., June 20-24. Exec. Dir. W. Floyd Maxwell, 420 Lexington Ave., New York 17, N. Y.

Mid-Atlantic Newspaper Mechanical Conf. —1956 Conf., Lord Biltmore Hotel, Biltmore, Md., March 8-10. Conf. Dir. Theodore A. Serrill, PNPA General Mgr., 300-312 Telegraph Bldg., Harrisburg, Pa.

National Assoc. of Litho Clubs — Exec. Secy. Frank Mortimer, U.S. Government Printing Office, Washington 25, D. C.

National Assoc. of Photo-Lithographers— 1955 Conf., Hotel Statler, Cleveland, O., Sept. 21-24. Walter S. Soderstrom, 317 W. 45th St., New York 36, N. Y.

National Printing Equipment Assoc., Inc.— 1955 Conv. meets concurrently with Printing Industry of America, Hotel Chalfonte-Haddon Hall, Atlantic City, N. J. Secy. James E. Bennet, 140 Nassau St., New York 38, N. Y.

National Safety Council Printing and Publishing Section—1955 Meeting, Conrad Hilton Hotel, Chicago, Oct. 17-21. Staff Rep. James D. Saul, National Safety Council, 425 N. Michigan Ave., Chicago 11.

New England Mechanical Conf. — 1955 Conf., Hotel Statler, Boston, Mass., Oct. 15, 16. Secy.-Treas. Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day*.

New York State Capital District Mechanical Conf. — 1956 Conf., Sheraton-Ten Eyck Hotel, Albany, N. Y., Jan. 28, 29. Dir. Floyd Laurenty, Schenectady (N. Y.) *Union-Star*.

Northwest Mechanical Conf.—1956 Conf., tentatively set for Radisson Hotel, Minneapolis, Minn., Feb. 18-20. Secy.-Treas.

Ralph N. Carson, Linecasting Instructor, Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis.

Pacific Mechanical Conf. — 1955 Conv., Sheraton-Palace Hotel, San Francisco, Calif., Sept. 9-11. Secy. Edward Maggi, Phillips and Van Orden, 870 Brannan St., San Francisco 3.

Packaging Institute Assoc. — 1955 Forum, Hotel Statler, New York, N. Y., Nov. 1, 2. Exec. Dir. Laurence V. Burton, 342 Madison Ave., New York 17, N. Y.

Printing Industry of America—1955 Conf., Hotel Chalfonte-Haddon Hall, Atlantic City, N. J., Oct. 15-20. Gen. Mgr. James R. Brackett, 719 Fifteenth St., N. W., Washington 5, D. C.

Research and Engineering Council of the Graphic Arts Industry, Inc.—1956 Meeting, Edgewater Beach Hotel, Chicago, Ill., May 9-11. Managing Dir. Robert E. Rossell, 719 Fifteenth St., N. W., Washington 5, D. C.

Rocky Mountain Mechanical Conf.—Secy. Mark McCoy, Union Printing Co., 2155 Lawrence St., Denver, Colo.

Screen Process Printing Assoc., Intl.—1955 Conv., Ambassador Hotel, Atlantic City, N. J., Sept. 10-14. Exec. Secy. Robert H. Blundred, 549 W. Randolph St., Chicago 6.

SNPA (Eastern Div.) Mechanical Conf. — 1955 Conf., Hotel Roanoke, Roanoke, Va., Aug. 22, 23. Secy. Ray B. Crow, Southern Newspaper Publishers Assoc., P. O. Box 1569, Chattanooga 1, Tenn.

SNPA (Western Div.) Mechanical Conf.— Secy., Walter Johnson, jr., P. O. Box 1569, Chattanooga 1, Tenn.

Southern Graphic Arts Assoc. — Secy. Charles E. Kennedy, 1514 South St., Nashville, Tenn.

Technical Assoc. of the Graphic Arts — 1956 Conf., Edgewater Beach Hotel, Chicago, May 7-9. Secy.-Treas. Philip E. Tobias, 140 N. 6th St., Philadelphia 6, Pa.

Sleeve-type Composition Roller

Wild & Stevens, Inc., has announced a printing press sleeve-type composition inking roller (shown cross-section in accompanying illustration). The Universal Dual

Composition Roller is made of a weather-resistant non-meltable center, covered with a tough and tacky specially developed outer sleeve. Sponsor states the roller has been thoroughly tested in all climates and has performed excellently in areas where widespread temperature changes occur seasonally. It is also stated that it is possible to eliminate seasonal roller changes and still get top quality, tougher and longer lasting performance. For the present, production is limited to job roller sizes only. For further information please mention PEE No. 490 in your request.

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MELBURN O. SIMMONS, Mid-West Advertising Representative, 333 North Michigan Ave., Chicago 11, Ill. Phone DEarborn 2-6467.

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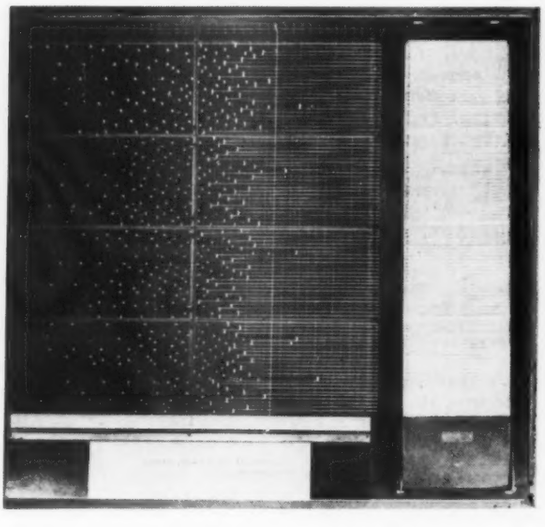
Help on Small Orders— Helping to keep track of small orders and avoid production bottlenecks is the purpose of the Produc-Trol boards. These visual record-keepers are developed by the Wassell Organization, Inc. From these boards, it can be seen at a glance where orders are in process and usual time consuming search of records is eliminated, says the sponsor.



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"The Saw with the Ball Bearing Table"

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"Finest Saw in the Low Price Field"

EasyKasters

Full Page
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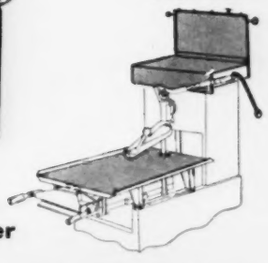
5 and 6 Column
EasyKaster

EasyKaster
Pig Molder

Scorchers

EasyKaster
Scorcher



Full-Page
Scorcher

Routers

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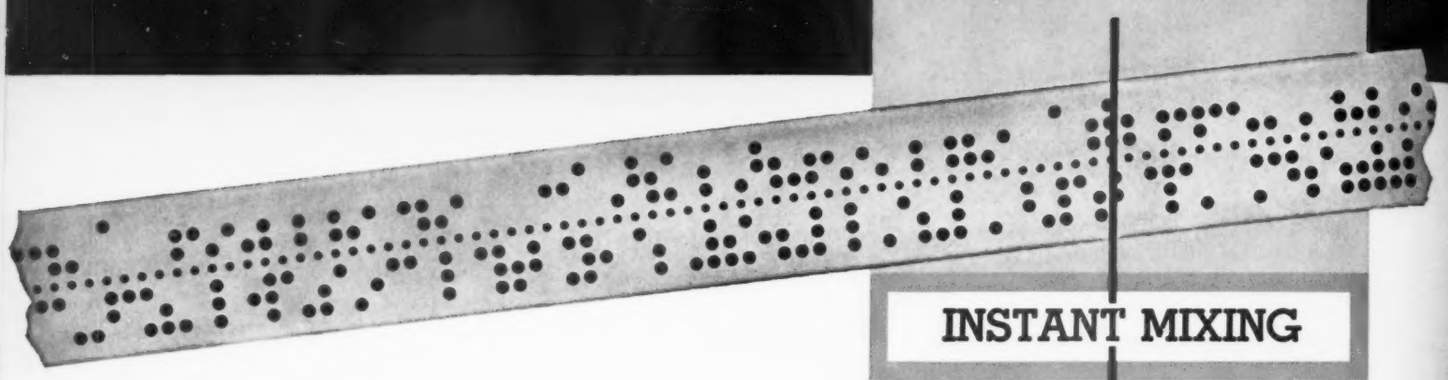
Full Page
PlateShaver

Hammond Machinery Builders INC.

1604 DOUGLAS AVENUE KALAMAZOO, MICHIGAN

For Top Production

The Intertype Mixer operated by Teletypesetter



INSTANT MIXING

The Intertype Mixer with a Teletypesetter operating unit sets mixed composition speedily and efficiently. Instant shift from one magazine to another is accomplished by a SINGLE TAPE IMPULSE. This *exclusive Intertype Mixer feature* is what makes this quick change possible . . . no delays—no additional tape impulses needed.

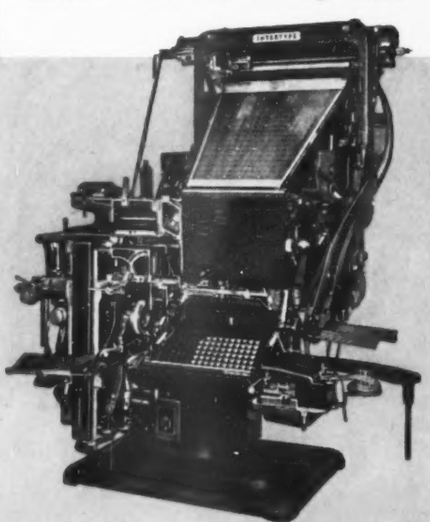
This means:

- **Lower composition costs**
- **Maximum flexibility in mixing**
- **Simpler operation**
- **Minimum maintenance**
- **Maximum production**

Important uses for the Intertype Mixer with automatic TTS control include: periodical composition with mixed heads; book and job work, including accented characters; telephone directory work; composition for check imprinting; law brief work; mixed type for greeting card imprints, etc.

Top-Level Talent. A sweeping Government employment program to attract and hold more top-level talent was recommended to Congress today. It came from the Commission on Organization of the Executive Branch of the Government. This is headed by former *President Herbert Hoover*. The report was the first of a series being prepared for Congress in the quest for more efficient and economical government.

More Pay. The report urged more pay for top managers, better training programs and greater use of merit pay increases. This, it said, would attract more able men and women to Government service and stem costly employee turnover. The turnover among Federal



Look to Progressive Intertype

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